

CHRISTMAS ISSUE

# Apple2000

THE NATIONAL APPLE USERS GROUP



DECEMBER 1986

VOLUME 1(3)



**USING  
THE IIGS**



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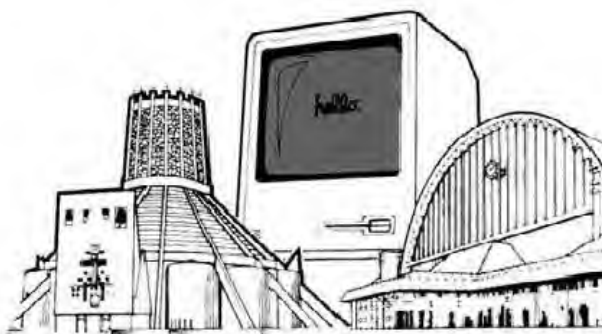
## Computer City

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## The Winning Macintosh Team

*There's something very special about them all!*

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# Apple2000

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## Coming in the February Issue

Computing on Apples for the disabled - we hope to bring several articles on this important subject.

Locksmith - Why - What - How.

Review of Multi-Scribe

Latest News on the GS.

News, Views and Tips from the world of Apple

The latest Software for Mac and GS reviewed or previewed.

# EDITORIAL

**W**hat an October we have had - the AppleWorld Show went well and our stand was overwhelmed with both new and old members all wanting to get information on the new GS. The new GS SIG is now beyond planning and we have started to get information together which will help you all when it is released this month.

The Macintosh members have been catered for in our new link-up with MacTel, this now means that we are not only the largest Mac group in the U.K., we now offer more than many large groups in the USA. This affiliation will increase the amount of information that we can get out and will stop duplication of resources and therefore allow us all to do more with the available time.

WOZ WAS HERE and what a man - he kept everyone spell bound during his extended talk at AppleWorld.

The journal took another leap forward in the last issue with a change of paper and a bumper 72 pages, this issue has 80 pages and is OUR LARGEST ISSUE EVER. Remember to keep sending in your contributions!

In the next few months Apple2000 will be working closely with Apple UK to produce a compatibility/product selector chart for the GS - this will involve lots of hard work but we are sure it will help members in selecting the right kit for the new machine.

Many members will see that subscriptions are now due for the next year, hopefully you will see that Apple2000 is more than just a magazine and will wish to stay with us over the next year when we have many exciting things to offer our members. This will start with a spectacular USER SHOW in March - we are also being involved at an early stage in the Mac User Show in May - this will be a major event with some special deals for our members.

Thanks to all those that have contributed and to the many dealers and members of the Trade - without your support Apple2000 would not be where it is today.

See you in 1987 - the year of the Apple !



*Jim Panks*

Jim Panks

**A**pple have now revitalised the // range and from the rumours coming across the 'pond', looks like the Macintosh is next in line for a new up-market face lift. If we are to believe some of the rumours or even water them down slightly, it would appear that a new Super-Mac will be born during the first few months of 1987.

With such a range of machines, Apple will be in a much better situation than IBM or any other Micro Company, with a whole range of machines suited for different tasks and in different price brackets.

Apple have changed into a much more efficient company and now find the time to listen to the customer, who after all is their 'bread and butter'. One hic-cup was felt by many members over 'Woz' and his attendance at AppleWorld. Unlike normal marketing practices where a 5% hit is a good average Apple found that they had over 70% of invitations for the conference returned and utter confusion reigned. The good thing to come out of this little hic-cup is that next time Apple will cater for the right numbers.

I have been working hard on many fronts this last two months and the end results should be plain enough inside the mag. I have managed to obtain some really good prices on many products from a wide range of suppliers. The best news for the membership is that we will only obtain reliable, well made and reasonable priced items. All we ask is that you help us help you by buying the stuff !

We need help in doing some of the nitty gritty tasks of running the club and putting the magazine together and therefore would ask for the memberships help - if you have any particular skills that you think would be of assistance to the running of the group or the magazine drop me a line or ring the office.

Right thats another years work finished - I'm now in training for the festive season. 🍏

**Merry Christmas and a  
Happy New Year to all our  
members and friends in the  
trade.**



## ABOUT.....

### Next Issue.....

**Copy Date 5th January 1987**

### Contributions

Please send any Apple related articles, tips etc to The Editor at the P.O.Box. or on BT GOLD 84:BSG041  
Articles preferred on (any Apple format) disk.

### The Editorial Team

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# XMAS SPECIAL OFFERS



## Micol Basic Software at below US Prices!

Micol Basic is THE structured, compiled BASIC for the Apple II range - it also runs on the GS, if you use BASIC and are thinking of a GS you can be assured that this is the one for you.

We will be offering an UPGRADE to a new version especially for the GS native mode in the early part of next year.

Order your Micol now at special prices and find out just how good it is and if you decide to upgrade to a GS we will ensure that you get the new version at a very reasonable cost. 🍏

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## Micol Assembler

We have a really superb Assembler editor (for the // series) that will not cost you an arm and a leg - you can get it for the same price as the States if you order it quickly. Yes this full feature editor/assembler will cost you exactly £36.00 plus £2.00 postage and the usual VAT. 🍏



## Macintosh Programmers 'Get the *POWER* without the *PRICE*'

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## Move on up to an 'Apple2000 Hard Drive' and really start using your MacPlus.

A SCSI 20 Meg Hard Drive for your Macintosh Plus, as used by Apple2000 for the publication of the journal. Your's for an amazing price of £699 + VAT. The latest version of this British made Drive is now available and will make your MacPlus 'Come Alive'. For the price of two 800k external drives you can have 20 Megabytes of fast disk storage. Send your order NOW. for delivery before Christmas. 🍏

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### 64k/80 Column Card for //e

This card emulates the Apple Card and is useful when using AppleWorks .... Usually priced at £69 we offer it at £29.00 + £2 Postage and VAT. 🍏

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FOR XMAS**

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## Apple 87

### THE APPLE USER's SHOW

Set in the splendid surroundings of the West Midland Safari Park, we again offer both the Apple User and family a superb day out.

Support is being given by Apple UK, Blyth Software, MacSerious, Celtip Computers and many other experts. Come Along at a **SPECIAL PRICE - BUT REMEMBER SPACE IS LIMITED BOOK NOW at £3.00(individual) or £6.00(family)** 🍏

## TWO BOOKS FOR XMAS

Getting the Most from your Apple II IIe IIc by Graham Keeler (excerpt in this issue)

Macintosh User's Handbook by Weber

Both of these popular books now available to Apple2000 members at **£6.75** including P & P 🍏

## Club News

Appleworld has been and gone, Woz came and went, the IIGS made its first public appearance, more local groups have been discovered, Apple2000 obtained dealership rights for Microl Basic and Microl Assembler, MacTel are affiliated to Apple2000, about 200 new members have joined the Apple2000 family. . . . . what an eventful time it's been since this column last appeared.

We all owe a vote of thanks to those local group members who volunteered to help on the Apple2000 stand at Appleworld, they did a terrific job in helping to answer enquiries and recruit members from the huge numbers of people who visited the stand during the show. For the record the volunteers included - Joe Cade, Mike Davies, Dave Flaxman, Mel Golder, Bob Hall, Julie Panks, Colin Shirras, Noel Smith and William Watson.

Everybody who met the Wizard of Woz was delighted to find that they were talking to a fellow enthusiast and at least one member came away with Woz's pen as well as his autograph ( No ! I'm not selling it at any price ).

Apple2000 gave thanks to Woz on behalf of the user groups and one of THOSE ties was included among the gifts to him (amazing how quickly the ties sold in view of the number of comments about their "refined styling" if you haven't seen them yet, buy one, they certainly ensure that you are recognised as an Apple2000 member ! ).

We are grateful to Apple U.K for provision of the user groups stand and for organising the show so well. We all look forward to the next one.

Jim Panks successfully negotiated the Microl distribution rights with Stephen Brunier who had been delighted with Dave Ward's review of Microl Basic and has since used it in his promotions. The dealership covers Eire as well as the U.K and I understand that we just managed to beat other interested parties to the dealership (Microl Basic works on the IIGS as well as the rest of the Apple II range).

Negotiations which culminated in our Apple2000-MacTel agreement were concluded during a committee meeting on 19-10-86. David Nicholson-Cole representing MacTel was present at the meeting and Ike led the Apple2000 side of the negotiations. The agreement is designed to : (a) improve the range of services to members of both groups. (b) strengthen both groups. (c) avoid duplication of effort and resource expenditure. (d) extend circulation of both groups magazines.

We hope that all members will be pleased by both of the above initiatives and if you are a Macintosh user renewing in January, look for the special offer - it is unbeatable.

I'm sure that we're all looking forward to the User Show, and to Woz's next visit, do I hear sounds of building from the West coast of Worcestershire ?

Right have a nice Christmas and I hope you will join me in a bright New Year with Apple2000. 🍏

Tom Wright



Merry Christmas  
and a  
Happy New Year  
from all at   
 **Apple<sup>TM</sup>**

Apple U.K. International Country of the Year.  
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# INSIDE THE IIGS

## A technical Overview

By Ewen Wannop

### 'The GS Machine'

#### Introduction

By now the GS has been known and talked about for some two or three months and we are beginning to get an idea of what it does, what it is capable of and what we might expect in the way of programming.

At the time of writing I have not been able to work with a machine directly, however I have seen the machine in action, talked to various experts, and have read from cover to cover the Technical Introduction as released by Apple. From this background I will outline some of my findings and thoughts on this new machine.

In future issues of Apple2000 I shall deal with more detailed aspects of the machine. At least at the moment that is what I intend to do. However I have a sneaky feeling that many of the programmers who have been working with the Macintosh, will desert that seemingly now rather limited machine, and join me in writing about, talking about and passionately programming the superb GS.

I rather like the description of the GS as the Granny Smith of the Apple range, a description that is supposed to have been in use at Cupertino. For the GS is indeed a thoroughbred Apple through and through, and with only a few exceptions will run Apple II software and Apple II expansion cards. Yet make no mistake, this compatibility with II software hides a powerful beast. The GS run in full 16 bit mode and with all its bells and whistles working, outperforms many a micro and in some ways its worthy stable mate the Macintosh.

It is not however a rival to the Macintosh. It does not have some of the speed that machine can exercise or the very crisp display, but with its very 'sexy' colour and its sound facilities, will enliven many a program with the visual excitement we have come to expect from the Macintosh. I fully expect that programs and programming will become even more exciting now we have the GS to work with. This will carry on the long tradition of the Apple computer started by its creator Steve Wozniak, that it should be a 'fun machine' for all.

#### How it is all achieved

The target set by the creators of the GS was to make a machine that could run the existing database of II programs and was also capable of working to present day standards of display and memory management. The choice of processor chip in the 65C816 allows all of this to take place. It is a CMOS processor chip capable of running at speeds up to the 2.8 Mhz maximum of the GS. By simply changing one of its registers,

it thinks of itself as a 6502 8 bit processor addressing a 64K memory or a 65816 16 bit processor addressing 8 Mbytes. This is the key to its compatibility. When you switch on the GS, it thinks it is a //e, albeit working at about 2.5 Mhz. It is only when the software tells it to, that it will change to 16 bit mode and really start to show itself off properly.

Although the chip has a 24 bit address bus, memory is addressed as a number of 64K banks rather than a contiguous array. In this way it is easy to emulate the 128K of a //e or //c, and allow for the expansion of memory in stages. The memory can be expanded in this way up to a maximum of 8 Mbyte of addressable RAM. By means of clever shadowing of certain banks of memory, the existing I/O, Text, Lo-Res and Hi-Res pages of display memory, can be handled easily within the limited memory map of the 6502 Apple II mode.

First let me explain how the memory is actually laid out in the GS. There are up to 128 banks of 64K memory available for existing and expansion RAM. This fits within the 24 bit address bus. On a standard GS there is 256K of native RAM in four banks. Two banks of this RAM are allocated as banks \$00 and \$01 and emulate the 128K of a //e or //c. The remainder of the 256K of native RAM is placed as banks \$E0 and \$E1, and is the actual RAM used for screen display. In 6502 mode, this is shadowed with the first two banks. When the program thinks it is writing to the text or graphic pages, it is in fact writing to these higher two banks of memory. In this way the display banks are kept clear of main RAM. In its native 16 bit mode, these display banks are written to directly. The I/O memory is shadowed in a similar way to the display memory.

There is also 128K of built in ROM, placed in banks \$FE and \$FF. In 6502 mode the monitor routines that should be seen in bank \$00 are read from bank \$FF. A further twelve banks are available from \$F0 to \$FD for future expansion ROM.

This is the layout of memory within the GS as seen by programs, most of this switching is achieved by various VLSI custom chips, and is quite transparent to the programmer or user.

#### The Hardware

Of course all this cannot be achieved simply. The technology behind the original Apple II could not cope with all of this without a motherboard the size of a cricket pitch. If we look inside the GS we see very few chips indeed and about the same in number as the //e. There are also the same number of RAM chips, only this time they are 256K in size not 64K. Most impressively, the whole of the //e has been reduced to one chip, and is like many of the other chips in a square package. Almost the only normal looking chip is the 65816 40 pin

---

# Do you want to trade in your old Apple II ?

---

For a Macintosh or Apple IIGS?

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# Yes

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package in the middle of the board. I think it will be impossible for the Taiwanese or even Alan Sugar to ever copy this machine!

There are seven normal Apple slots at the back of the board, a special memory expansion slot towards the front, an array of built in connectors at the rear and to retain full Apple II compatibility a 16 pin games socket and a //e keyboard connector. The motherboard can in fact be put into a //e, and this is a path that is available in the States, but in the UK it has been decided not to offer this option and to reduce the cost of the machine instead to a price that is said to be lower than the States.

We can see in the GS a divergence from the programming standard laid down by the Apple II. Programmers will have to learn to use the software Toolboxes provided rather than try to address the devices directly, though the GS is a truly open machine and this can be done, though rather cumbersome, if desired. The machine is naturally more complex than the II series in its full 16 bit native mode and the various event managers and toolbox facilities, operating as they do in a similar fashion to the Macintosh will allow an ease of control from application software.

The GS has several differences to the II series. Color displays are quite magnificent when in full flight and allow fast animation by means of fast block moves from extended memory. Gone are the obscure addressing modes of the old Hi-Res pages, we now have Super Hi-Res lines that lie in a linear fashion in memory. 32K of memory is used for a full screen of 640 \* 200 dots and any of 16 colours may be present on any line. This may seem a limitation of colour display, but the next line may have another 16 colours and so on. The maximum per screen is 256 and the 16 colours of each line are selected from one of 16 palettes. The individual colours of any palette can be selected from one of 4096 shades. The effect is to produce a picture which is quite stunning and has an almost TV like quality.

Probably the most impressive thing about the GS, aside from the colour display are the sounds that can be produced. The normal sound of the II is reproduced in the 6502 mode, though you can now change its volume if you wish. For the full works however, an Ensoniq digital oscillator chip has been fitted. This chip, originally from a music synthesizer, has 32 oscillators and 64K of its own dedicated RAM. Two of the oscillators are reserved and with a pair making a single voice, we have 15 voices available for our use. The actual sound is quite impressive and played through a proper Hi-Fi system, digitised sound is almost as good as the original recording. Full Toolbox support is given to this chip and as it uses its own RAM and also because it generates its own notes, real time sound can be created with little program overhead.

There is a built in battery back up clock in the GS. However this is not implemented in quite the same way as clocks on the //e and so must be read using the Prodos8 or Prodos16 clock commands rather than the old Prodos itself. Normally you would set and control this clock with the control panel and only have it read from a program.

Two built in Serial Ports emulate the Super Serial Card from firmware and are similar when used in this way to those on the //c. However the chip used is the Zilog 8530 and programs using the serial ports directly, which includes most existing communications programs, will not operate without patches to the coding. Serial cards plugged into one of the seven slots will work normally with existing programs and

should cause no problems.

The keyboard and the mouse are interfaced with a single serial connector. They daisy chain from each other in a similar way to the Appletalk network and in fact form part of a new Apple Desktop Bus. It is expected that other devices will be available to this standard in future.


The GS is a fully interrupt driven machine, as is the //c. Most events are polled regularly through the interrupt sequences, and so it is possible to have type ahead keyboard, and input/output buffers for the serial ports.

## To sum up

The hardware as you have seen is quite different from its Apple II predecessor. It will mean that programmers will need to work in a different way than they may have been used to. It will be safer for the programmer to use the Toolbox and its memory management, rather than address the memory map directly as was often the case on the II series. Macintosh programmers will be used to this approach and will find many similarities in the GS.

Existing programs should all run quite happily in the fast 2.5 Mhz environment. This can be slowed down if necessary from the control panel to the old speed of 1 Mhz. However there will be the odd program that does not work. Mainly this will occur with protected disc based software that relies on very careful timing for the protection routine to operate. There may also be a problem with software that uses non-standard entry points to the Monitor routines. The screen is seen as though it was an enhanced //e and so mousetext may appear instead of inverse characters in some programs.

The slots are quite standard and peripheral cards should work quite normally. However, with the memory being paged in banks, any address decoding on the cards must use the normal device select and I/O select signals to operate smoothly. Cards using the system clock signals and this includes most Z80 cards, may have trouble as the clock is no longer standard. There is no extra slot in front of slot 3, any cards designed for the //e expansion slot cannot therefore be used.

All in all, it is quite an impressive machine. It is challenging for both traditional programmers and those now used to machines such as the Macintosh. It is also in the long tradition of Apple computers, a 'hackers' machine and also in that tradition, a 'fun' machine. 

This is the first of a series on the technical side of the GS.

## THE WORDSMITH

The creative writer's magazine.

Published bi-monthly and costing only £6.75 per annum, **The Wordsmith** allows writer's to keep up with the 'electronic age'.

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# Product News

Compiled by Jim Panks from Press Releases at AppleWorld

All items on the Product News page are from notifications by the respective vendors.

## MICROSOFT

### Word 3.0



Microsoft Word has been upgraded to version 3.0. and will be available in January 87 with an upgrade for existing users. The major new features of **WORD** are style sheets, spell checker, outlining, page preview and a revolutionary three level menu system. Style sheets, spell checker and outlining are features brought across from the IBM version and the page preview and three level menu system are designed to take advantage of the Macintosh user interface.

The three level menu system offers Short menus, Full menus and Custom Menus. Short menus are designed for the first time user and allow access to the most common features. Once the user feels comfortable with these commands upgrading to the Full menus will allow use of the more powerful features. Experienced users can customise menus to develop their own menu system and to provide short cuts for often accessed commands.

Other features include Data exchange - you may swap data between **WORD** and IBM's DCA and Windows environment. Context Switching allow's the user to switch between MacDraw, Paint and Excel. You can take drawings, diagrams and graphs and paste them directly into **WORD**.

R.R.P. To be announced.

*(We hope to review this package in the near future.)* 🍏

## MICROSOFT

### Works



Microsoft Works is a new integrated package with a full function word processor, database, spreadsheet with graphics and communications module. **WORKS** like the highly successful Apple Works for the Apple II, provides broad functionality in a single, inexpensive package. It expands on Apple Works features and is easy to use. Data from applications can be easily combined and switching between them is an easy click of the mouse.

Some of the features are: **Word Processor** - Form Letter capability, automatic pagination, custom size option for printing labels and a new draw mode for drawing directly on the page.

**Database** - 60 fields per form, add, delete or rename fields at any time, four windows on a file at any one time, and a merge facility with the word processor. **Spreadsheet** - 256 columns and 9999 rows, 54 built in functions, sort on three columns at once, four windows at any one time, integrated charting facility, up to eight charts can be stored with each spreadsheet file and you can merge spreadsheet or charts into the word processor. **Communications** - Store up to eight telephone numbers, supports XMODEM and MacBinary protocols, runs in the background whilst other **WORKS** tasks are performed, and all spreadsheet, database and word processing documents can be sent without conversion.

**WORKS** is compatible with Excel and Word and requires a 512k Mac or Mac +.

R.R.P. £250

*( We hope to review this product in the near future )* 🍏

## ASHTON - TATE

### dBASE MAC



Ashton-Tate have launched **dBASE MAC** and expect it to be available early in the New Year. This 'second-generation' DBMS (Data Base Management System) offers power without programming through the Mac interface, it also allows full feature procedural language and direct access of .DBF files from IBM compatible bBASE.

No details of price are available yet.

*( We hope to review this product in the near future )* 🍏

## Human Computer Interface MacBCPL



MacBCPL is a complete program development system which allows the implementation of stand-alone applications on the Macintosh. It has a powerful compiler, a linker, a set of library routines which allow easy access to the I/O facilities. The editor has been designed for use with source programs. To help users, a comprehensive manual describing all the special features of **MacBCPL** and the Mac ROM interfaces is included, together with an example program called 'windows' which demonstrates how to use all the standard Mac features. R.R.P. £149. More information can be obtained from Human-Computer Interface Ltd, 11 Brunswick Walk, Cambridge, CB5 8DH. Telephone 0223 314934 🍏

## Broderbund Animate

Apple 128k //c or e

## Cricket Draw Heyden & Son



## Osborne McGraw-Hill

### Apple IIGS™ Technical Reference.

## Osborne McGraw-Hill The Advanced Guide to Microsoft Works

## Octopus Software

### MouseStuff

Apple //c or  
Enhanced //e

**Animate**, the same sophisticated tool used by Broderbund's designers to create state-of-the art graphics, is the first double hi-res software program for creating cell-style animation. Professional programmers will want to use **Animate** to accent their own programs.

**Animate** includes pre-designed backgrounds - or it lets you design new ones from scratch. It's also packed with predrawn, pre-animated objects to get you started. If desired, any drawings from Broderbund's Dazzle Draw can be put to use in **Animate**. As many as 16 different characters can be incorporated into a single scene. As an added feature, the characters, frames and scenes you've designed can be printed in either colour or black and white. And if that isn't enough, text and a soundtrack can be added to enhance the animation.

**ANIMATE** (128k Iie or Iic) £59.99 plus VAT. Available from: **MGA Microsystems**, 140 High Street, Tenterden, Kent TN30 6HT

**Cricket Draw** is the latest in drawing programs for the Macintosh. **Cricket Draw** is not just another drawing program it is a revolutionary object-oriented drawing package, which allows you to extend your graphics capabilities far beyond the screen limits imposed by other draw software. Some of the innovative objects available in this package are: Starbursts - elliptical arcs - freehand drawings - Bezier curves - log and linear grates - diamonds - rectangles.

Users can create blocks of text, similar to MacWrite; Manipulate any object and text by drag, reflect, fountain, tilt, rotate, shadow, resize; Select line style, border, fill. Ruler varieties (picas, points, pixels, centimetres, inches); Position text along any path; Zoom and much, much more.

With **Cricket Draw** you can also push PostScript to its limits as never before! Commands such as Search and Replace as well as a host of other editing functions are now at your disposal - even colour generation from a colour palette! The shape of things to come?

Available soon - Price not known. Contact **Heyden & Son Ltd.** Spectrum House, Hillview Gardens, London NW4 2JQ

OsborneMcGraw-Hill announces the book on Apple's hot new computer, the **Apple IIGS™ Technical Reference**. Michael Fischer, the same author who wrote the acclaimed *65816/65802 Assembly Language Programming*, now looks inside the Apple IIGS and gives serious programmers detailed information on all aspects of its architecture. All three operating modes are clearly explained so you can write software that runs on 8-, 16-, or 32 bit systems. Fischer's insights on software and firmware, the Apple II GS' built-in software, lets you get performance from the hardware through ROM operating system, the disk I/O and serial I/O and the Apple IIGS' powerful toolbox. Programming with colour graphics, sound, desk accessories, AppleTalk™ and other enhancements are thoroughly covered. The **Apple IIGS™ Technical Reference** shows you how to upgrade from your Apple II, design elegant software and wholly understand the inner workings of Apple's incredible IIGS. Available from **Osbourne**.

Price and availability not yet announced.

Realize the full power of Microsoft Works! with **The Advanced Guide to Microsoft Works** by Donald J. Scellato. This advanced guide shows you how to expand your skills with Microsoft's new integrated software. With your Macintosh™ computer and this dynamic package you can combine five functions: word processing, database, spreadsheet, graphics and communications - for a wide range of business and classroom applications. Author and software instructor Scellato gives you inside tips on troubleshooting glitches; transferring data between Microsoft Works and other software; fine-tuning printers; merging input from special hardware, including the mouse, numeric keypad and printer; and incorporating data from Microsoft Works into Excel™; Microsoft's graphics-oriented spreadsheet. Available from **Osbourne**.

Price and availability not yet announced.

**Octopus Software**, a new software developer in Leeds, have released a utility for Pascal programmers who possess an enhanced Apple Iie with an 80 column card, or an Apple Iic. Called **MouseStuff**, it is a collection of routines, written in Assembly language, that allow the programmer to use pull-down menus in his own programs. They also allow saving, restoring or clearing part or all of the screen and incorporate a very fast routine for writing to the screen. As the name implies, full use of the Mouse is possible, both to open the menus and to point to areas of the screen. An interrupt driven routine moves the Mouse arrow completely automatically. However use of a Mouse is optional, as the menus can be opened from the keyboard as well.

The utility is supplied as a Pascal Unit that installs in the System Library and the routines are called as Pascal procedures and functions, so no knowledge of Assembly language is required. All versions of Apple Pascal are supported, except that Pascal 1.1 will not allow use of the Mouse.

The price is likely to be under £40.

For more details contact **Holdens Computer Services**, Preston (0772) 561321

**Bookkeeper II** is a simple-to-use, easily learned, reasonably priced method of keeping business books and control of expenditure and petty cash. Whilst practice makes perfect this program can be approached with confidence by someone who has never previously used a computer or has no "in-depth" knowledge of accounting, as simple non-accounting terms and instructions are used throughout the program.

The program handle up to 99 Cash Book accounts, 400 Sales and Income accounts, 499 Purchase and Outgoing accounts and 30 Standing Orders. As many as 32,000 transactions can be stored providing the data storage volume is large enough. The program includes a comprehensive manual with both 5.25 and 3.5 disks supplied. Compatibility with the Apple IIGS is ensured. RRP £99 + VAT and it is available direct from AMP or from any Apple Dealer. 🍏

*(Review in Progress )*

**Omnis on the IIGS....** Blyth Software have announced a range of products for the new machine - these include single user versions of **Omnis 2** and **3** and two **Omnis 3** multi-user versions. A suite of accounting packages including Sales, Invoicing, Purchase, Stock and Nominal have been released.

Existing Registered Users have no need to upgrade the software to run on a GS, however they will benefit from a new manual which has been produced and is being offered at a nominal £25. Contact **Blyth Software** for full details. 🍏

*(Review anticipated shortly )*

**Glanmire Electronics** have announced the launch of a number of products for both the Apple II and Macintosh range. These include the **GE UniShare** networking system which allows up to 256 Apple II computers to share UniDisk 3.5 Drives and/or 10 or 20 Megabyte Hard Drives. It is easy to install and use, and in addition shows a considerable cost saving over connecting separate drives to each machine. This system is compatible with all II series including the GS.

**Macintosh Plus Users** have now a cheap method of upgrading their machines from 1MEG to either 2 MEG or 4MEG with the **GE Memory Upgrades**. The upgrades are easy to install and give you the memory to use all the features of the latest software, including massive 'Switcher' configurations. Special Prices are available at present: £299 for the 1 Meg upgrade and £999 for an extra 3 MEG.

Contact **Glanmire Electronics** for further details. 🍏

*(Review in progress )*

**Orange Micro** - the California based company have taken the four most wanted page processing applications and integrated them into a single, easy to use package called "**RAGTIME**". The new package moves Desktop Publishing into a new realm of convenience where you design your page using frames. Just drag a box, designate it as text, spreadsheet, or picture and with a simple building block approach you can create the appearance that you want.

**Ragtime features** - Integrated Page Processing, WYSIWYG editor, split screen with nine windows and up to 350 pages per document. Page Layout special features include Leading and Kerning, Text sizes from 1-127 points and rulers in various measurements. You will need a minimum of a 512k Macintosh.

**RAGTIME** is available from **P & P Micros** and costs £299 + VAT. 🍏

*(Review in next issue )*

**InterMail** has been released as a central resource manager for the AppleTalk network, and supports directory service and list management function as well as information storage facilities.

**InterMail** allows users on one or any number of local or remote networks to communicate with each other and transfer files quickly, easily and conveniently. **InterMail** is flexible and has considerable speed and power from within your applications.

**Intermail** is available from **Computers Unlimited** and no RRP has been notified. 🍏

*(Review copy requested )*

**Infosphere Inc** of Portland, Oregon has unveiled a new LaserWriter spooling package. **LaserServe** is the only professional software for AppleTalk printer spooling available and it makes it easy for users of LaserWriters and AppleTalk ImageWriters to get back to work quickly without having to wait for their own or others printer output to finish. It requires a Macintosh with at least 512k and a floppy disk drive and operates as desk accessory in the background.

No price or dealer known at present. 🍏

## ADVANCED MICRO PRODUCTS

### BOOKKEEPER II for the II series including GS

## BLYTH SOFTWARE

### Omnis 3 & 3 for the Apple IIGS

## GLANMIRE ELECTRONICS

### GE UniShare for the II series. GE MacPlus Upgrades



### Orange Micro Ragtime



### internet InterMail



### Infosphere Inc. LaserServe



## Blyth Software.

### Omnis 3 Plus Upgraded to 3.23



Version 3.23 of **Omnis 3 Plus** has been released by **Blyth Software**. The changes from the previous version are: 1) The results of date calculations which evaluate to an empty string are set to the empty date. 2) Fields in heading and total sections of label reports which are beyond the report width are now printed. 3) Page and job setup are now saved with the report format. 4) 'Change Omnis Date' has been removed. 5) All system reports now use standard Macintosh printing (except within Utilities). 6) Print sequence details has a repositioned page and an indication of the percentage of sequence space which is in use. The headings for all system reports include the time. 7) The print report command now only clears the main file and its connected files. 8) A select import file command with an empty file name now closes the previous import file without displaying an error message. 9) Fixed position fields in reports fix the following text as well as the fields. 10) Copy protection has been removed.

Details available from **Blyth Software** or your local Apple dealer.



## PINPOINT

### New Utilities and Programs for //c - GS Enhanced //e

**PINPOINT** publishing have released a series of new programs for the Apple IIc, enhanced IIe (65C02), and IIGS which extend and compliment their popular desktop accessories and spelling checker program. The programs are: 1) **Infomerge** - a full featured mail merge and reporting program for AppleWorks. This stands alone from AppleWorks and accesses database files and word processor documents for full merging. Advanced features include selective searching of databases and multiple calculated fields (e.g. for invoicing from AppleWorks). Price is £79.00

2) **Point-to-Point** - professional communications program which contains all the requested features in one package. Includes auto dial/answer; online printing; test editor; print formatting; online file handling; clock support PLUS a powerful macro language with 14 commands. Handles AppleWorks files as well as text files. Point-to-Point is the only communications program that lets you use all 8 Pinpoint Desktop Accessories - all at the touch of a key. Price is £119.00

3) **Document Checker** - Companion to the amazing pop-up spelling checker for AppleWorks. The document checker can spell check any ProDos text files, as well as AppleWorks and so can be used with other word processors, such as AppleWriter. Shares the same dictionaries and amazing accuracy as Spell Checker yet runs much faster by utilizing the full computer memory.

Price is £69.00 Spelling checker plus document checker together £99.00 4) **Pinpoint Toolkit** - As if the power of PinPoint weren't enough, here are the tools to customise or write your own desktop accessories. Includes 8 new accessories. To write your own accessories requires either assembler, **Micol Basic** or **Kyan pascal**. Price £49.00 5) **Keyplayer** - At last a macro program for AppleWorks that is compatible with Pinpoint. Installs as a Pinpoint desktop accessory and is the only macro program that works with AppleWorks and Pinpoint desktop accessories at the same time. Available mid-December. Price £49.00.

Available from **Bidmuthin Technologies**, (or from your local dealer).



## LEVCO

### Prodigy 4™



The ultimate upgrade to make your Mac like a Vax; Mainframe power at a PC price with the **Prodigy 4™**, Levco's latest performance enhancement for the macintosh computer. Imagine a personal computer that combines unprecedented ease-of-use with Vax processing power.

The **Prodigy 4™** is the first Macintosh performance enhancement to feature the new Motorola 68020 Processor. The **Prodigy 4™** board simply clips on to a 128K, 512K, or Macintosh Plus motherboard for easy installation. With the 68881 floating-point math co-processor, 4 Megabytes of RAM, and an onboard SCSI hard disk controller, the **Prodigy 4™** transforms the Macintosh into the *most powerful personal computer in the world*. Best of all, it's 100% compatible with all Macintosh software that follows Macintosh design guidelines.

Dealer details and price not known yet.



## Bidmuthin Technologies

### VIP PROFESSIONAL

//c or Enhanced //e  
with extra memory  
board

#### Lotus 1-2-3 on the Apple II - VIP PROFESSIONAL

**Bidmuthin Technologies** are pleased to announce **VIP Professional** - a new generation spreadsheet for the Enhanced Apple IIe (65C02 version) and IIc. **VIP Professional** brings the power of Lotus 1-2-3 release 1A to the Apple IIe (enhanced) and IIc. The integrated spreadsheet, database and graphics of 1-2-3 also adds a full-blown Mac-style interface.

**VIP Professional** can address up to 4 megabytes of memory and requires at least 256K of memory. Memory needs to be of the RamWorks type for the IIe (not RamFactor or Apple Memory board), or Z-RAM for the IIc. Unidisk or 2 x 5.25" drives required. Mouse, TransWarp are optional. Price: £249.00 or £199 if purchased with a 1 Meg RamWorks / 1 Meg Z-RAM.

Available from **Bidmuthin Technologies** or your local Apple Dealer.



# What Magazine ?

## A look at Apple Mags on the other side of the pond

By Adam Gilinsky

British Apple fans can cast an envious eye across the Atlantic, where users are spoiled for choice of books and periodicals easily available at local dealers, newsagents and bookstores.

There are several reasons why you should consider subscribing to foreign publications, firstly to get a variety of opinions on new and US only products, secondly to save money by mail ordering US products direct and thirdly to get program listings.

Take advantage of a strong pound, even with postage etc. direct ordering may save you half the price and it will take at least six months for U.K. distributors to pass along these savings, though of course there are drawbacks - slow delivery and less support.

I purchased issues of six magazines while in the U.S. All but one are Apple only, two are new showing the vigour of the American market despite prophecies of a major slowdown. Periodicals are usually more expensive in the U.S. and there are mail charges, to balance this, subscriptions are heavily discounted to build circulation and attract advertising revenue.

A+

Now in its fourth year, A+ is published monthly by Ziff Davis, a large New York publishing company, along with an annual 300 page Buyer's Guide. At 170 - 200 glossy and colourful pages, this is the largest reviewed publication and the most widely available.

*'In general, A+ is an extremely up-to-date publication for serious users....'*

The use of a cover theme, Byte-style and loads of advertising tend to interrupt and bury articles. Competition is fierce, so shop around and read the small ads. Prices can drop quickly on new items and A+ has the most recent ads in any month, which might be important. Reviews are well featured in A+, with a slight bias to software. Major new releases get a whole article and are critically compared. About 20% is set aside for the Macintosh.

Features tend to be technology reviews, book excerpts and articles on installations or types of user. The regular departments get the rest of the editorial space and include industry and product news, short game reviews, a puzzle, a letters page, an excellent education column and a useful queries section. There are no program listings as such.

In general, A+ is an extremely up-to-date publication for serious users who can afford to buy new items regularly. The overseas subscription cost is now \$19.97 plus \$6 postage surface mail, making it a bargain.

## APPLE II REVIEW

The Apple II Review is put out by Redgate Communications of Florida and in its second quarterly issue (Winter 1985), there were about 75 pages of reviews in an 85 page issue, with only a few pictures to add colour to the easily read three column format.

The first quarter of the magazine is devoted to hardware, with a special section for IIC add-ons and Apple Inc. releases, then hardware of various types - clock, memory and multifunction cards, and power and storage devices.

*'Unusual products, can be found as can the usual cards and games.'*

The software categories include an excellent educational section, Entertainment Personal Finance, Productivity (!) and Appleworks accessories. Many reviews could be longer and more critical, the lapses being partly due to the difficulty of catching the latest releases in a quarterly magazine.

Only 20 advertisers are listed in the index, including Apple Computer. Unusual products can be found as can the usual cards and games. At \$5 per copy in the US, it's a good buy but not at the overseas subscription price of \$40 per year.

COMPUTE!

Compute! is published monthly by ABC, the American Broadcasting Company and caters for every home computer found in the U.S., including Apple, in 130 pages. The style is matter of fact and aimed at the hobbyist, particularly new recruits, including lengthy and detailed reviews of new entertainment and home software and well written columns discussing technique.

*'The style is matter of fact and aimed at the hobbyist, particularly new recruits.....'*

The heart of the magazine is its program listings. Usually one big game or entertainment program, with listings for each machine in machine code or Basic, some machine specific utilities and sometimes a major application, written in machine code - well worth the price of a subscription.

Major discount dealers don't advertise in Compute!, it is supported by software publishers. The new classified section has only added to the grey appearance.

A guide to typing in the programs is given and interactive program checkers for both Basic and machine code listings, though you may need to collect a couple of issues to get the Apple machine code editor. Quite a few of the Basic programs use data statements to poke in machine code and these run quickly. Some recent utilities: a fast disk duplicator, a memory splitter, a keyboard customiser and a text windows routine, the more recent utilities are aimed largely at the IIC, though the major programs will run on any II.

Compute! is sometimes available at British newsagents for £3.00 per issue. A subscription of 12 issues for \$18 plus \$6 for overseas mail is good value. My only reservation is that the Apple content varies so much.

As other magazines strive to keep up with the Macintosh and its rivals by introducing new sections, this bimonthly put out by Antic Publishing of San Francisco is devoted to the older machines and only started up last year. It combines interviews, previews and reviews, discussions of advanced programming concepts and program listings - all in 100 pages!

With limited use of colour and large typefaces - even in the listings section, the articles appear longer than they really are, leaving this reader vaguely unsatisfied, although the quality is high. Reviews are software oriented, with a page devoted to each package and all major areas get the same attention. Features, columns and departments take up half the magazine and articles have included an interview with Steve Wozniak, a discussion of the 65C816 chip; and Appleworks features by the authors of the software.

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***'all major areas get the same attention.'***

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There is a list of the addresses of companies mentioned at the end of every piece. The sixteen page pullout section contains the program listings, a typing checker and accompanying articles. Since there are five or six programs, each is short, and I'm not sure they are really worth typing, though they sound exciting (e.g. Music Graph, Basic Graph, Hi-Res to Print Shop Converter, Mountain Skiing etc.).

Only about 20% of the magazine is taken up by adverts which are unobtrusive and hardware oriented, with the usual game adverts as well. A six issue subscription at \$11.97, plus \$10 for overseas mail, makes it the least expensive of the periodicals reviewed.

## INCIDER

In many ways, inCider, based in New Hampshire, is the magazine for average Apple users. It fits reviews, tutorials, reader support and a small number of program listings comfortably in about 120 pages. Perhaps a quarter of the magazine is devoted to reviews and inCider is not afraid to tell you exactly what it thinks, with star ratings on ease of use, documentation and support etc.

There's lots to be done with an Apple II and inCider will tell you all about it, in features on user's successes, tutorials and advice columns. Then here are the program listings, they're not over long, which is as well since there is no typing checker, but they are available on disk. All articles list pertinent addresses and there are the adverts, from manufacturers, software houses, discount suppliers, and on-line services - over 60 in all.

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***'There's lots to be done with an Apple II and InCider will tell you all about it...'***

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Incider is a good buy for the critical reviews and its responsiveness to readers, although it is never right on top of the latest developments. At \$2.95 per issue or \$24.97 per year, \$44.97 overseas, it's the most expensive magazine reviewed. It can be found on some London newsagents at £2.70 per issue.

Nibble, billed as "the reference for Apple computers", is in its seventh year, growing into a bulky monthly magazine, peaking at 160 pages. It's heavy in every respect, with small type, few though colourful pictures and diabolically complex program listings. Nibble is about in house programs so reviews get fairly short shrift, these are software oriented and often feature unusual programs not reviewed elsewhere.

A typical issue contains eight programs, some of which form a series, others include games, a home helper, a graphics feature and several utilities. Perhaps most interesting is the one and two liner section. These are as much as I can bring myself to type in, since you must buy the program checkers separately - \$30 each.

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***billed as "the reference for Apple computers"***

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The attitude of the publisher, Mike Harvey, may strike you as mercenary, a thought confirmed by his readiness to go to the courts to protect his programs. In his defense it must be said that he, like Apple Computer, is a successful pioneer and that the programs look inexpensive, innovative and interesting - but then I wonder why they aren't found on the best seller list and why the programs are bundled, forcing purchasers to take programs they may not want.

The advertisers must be happy with the formula for all the regular Apple suppliers can be found and there are a lot of adverts. To sum up, Nibble offers a great deal for \$3.25 per issue, or you can wait and "buy the book" - Nibble Express is a yearly compilation of updated listings for \$20 or less, plus \$2.75 surface or \$6.50 air mail, which compares favourably to \$26.95 plus \$13 surface mail for a year's subscription.

## OTHER MAGAZINES

There are some magazines missing from this review, most notably Byte, C.A.L.L. APPLE and Open-Apple. Byte is widely available in the U.K. but has reduced its coverage of the II series significantly and I have no copies of C.A.L.L. APPLE.

Apple has a huge presence in the American market and there are many channels for the distribution of periodicals; my selection could not be complete.

For those of you who read French, I would like to mention Golden, "Le Magazine des Utilisateurs d'Ordinateurs Personnels APPLE". Some very innovative programs come from France, particularly the Mouse series which is very popular there. I can recommend Golden, which covers the scene well in 100 pages bimonthly for about 6 Francs an issue plus mailing.

## SUMMARY

### WHICH TO BUY, WHERE TO SUBSCRIBE,

### HOW TO PAY

My first choice would be Compute! where a low price and high utility value make up for low Apple content. However, I would also pick A+ from the wholly Apple magazines, it gives the

fullest picture of the U.S. Apple market and both inCider and II Computing are worthy rivals. Nibble would be third choice, but is really recommended for the advanced user, or for a user's group.

Finally, a note about how to pay. For any of these, you will need to pay in U.S. dollars. All take credit card orders except inCider. Visa or MasterCard (Access) will do, though A+, Apple II Review and Compute! do take American Express and credit cards usually get a better exchange rate than cash or cheque.

All but Nibble and Apple II Review will take your order and bill you later. InCider insists on U.S. funds drawn on a U.S. bank, but a certified cheque or postal order are likely to be o.k. Remember it can take up to two months to get your first issue, in the meantime, rely on Apple2000!

## SUBSCRIPTION INFORMATION

(Overseas subscription rates, surface mail)

### A+

P.O. Box 2903, Boulder, Colorado, 80321 U.S.A.  
\$25.97 (£16.65) - twelve issues.

### Apple II Review

Redgate Communications Corporation, 3381 Ocean Drive,  
Vera Beach, Florida, 32963 U.S.A.  
\$40 (£26.67) - four issues.

### Compute!

P.O. Box 914, Farmingdale, New York, 11737 U.S.A.  
\$24 (£16) - twelve issues.

### II Computing

P.O. Box 1922 Marion, Ohio, 43306 U.S.A.  
\$21.97 (£14.65) - six issues.

### InCider.

CW Communications/Petersborough, P.O. Box 911  
Farmingdale, New York, 11737 U.S.A.  
\$44.97 (£29.98) - twelve issues

### Nibble

Nibble Publications, 45 Winthrop Street, Concord,  
Mass. 01742-9990 U.S.A.  
\$39.95 (£26.63) - twelve issues.

### Open-Apple

10026 Roe Avenue, Overland Park,  
Kansas 66207 U.S.A.

### Golden

185, Avenue Charles de Gaulle 92521  
Neuilly-sur-Seine Cedex, France  
52 f. (£5.00) - ten issues



## COMTEC COMPUTER REPAIRS

- \* FAST TURNAROUND - NORMALLY 2 DAYS
- \* 3 MONTH WARRANTY
- \* COMPETITIVE PRICES ON ALL APPLE REPAIRS AND UPGRADES

### EXAMPLES

Apple ][ + or //e Power Supply	£32
Apple ][ + or //e Motherboard	£32
Apple Interface cards (most makes)	£25
Disk Drives - cleaned/aligned	£25

Please ring for other prices  
or post equipment for free estimate.

Quantity discount available.

Prices include P+P and 15% VAT  
Also

### MACINTOSH UPGRADES

128k to 512k

128/512k to MACINTOSH PLUS

RING FOR MOST COMPETITIVE PRICES.

COMTEC, ST GEORGE'S MILL,  
3 ST GEORGE'S STREET, MACCLESFIELD,  
CHESHIRE, SK11 6TG  
Tel (0625) 34691

## C.I.CAYMAN



### NUMERIC KEYPAD FOR //e.....

latest design, plugs directly into port  
on //e mother board, 16 keys + - \* / = ENTER

£19

16k RAM CARD ][, ][+

£29

128k RAMCARD ][, ][+, //e

£69

Apple compatible half height disc drive  
(pancake motor mechanism).

£89

13/16 sector controller for above.

£25

64k/80 COLUMN CARD //e

£25

80 COLUMN Videx compatible with built in 40/80  
softswitch for ][+

£35

280 CP/M board.

£29

RS232 serial:

£29

Serial plus card (software selection of protocol,  
suitable for use with a modem).

£49

Printer Interfaces: Parallel (Centronics-Epson)

£29

Parallel Grappler compatible.

£39

Parallel Grappler with 64k printer buffer.

£79

7.5A HD POWER SUPPLY for ][+ and //e

£49

Replacement Keyboard for ][+

£49

Fan ][+, //e

£29

Reconditioned Apple //e systems, all have been  
brought to 'as new' condition, offered with our standard  
12 month warranty (including 64k/80 column text card).

£225

(+VAT)

All prices exc VAT, postal carriage £3 under £100, £5 over £100.

Apple Repairs - phone for quote.

021 - 705 7097

C I Cayman Ltd. P.O.Box 77, Solihull, West Mids.  
B91 3LX

# LOCAL GROUP CONTACTS

This list is compiled by Tom Wright - Please notify him of any errors.

Are your local group details here ? - If not contact Tom and let him know.

## BENTWATERS APPLE USER GROUP

CONTACT - John Thomas Tel : (01944) 277124  
VENUE - R.A.F. Woodbridge  
MEETS - 7.00pm first Tuesday of each month  
NEWSLETTER - Published monthly

## BRISTOL GROUP ( B.A.U.D )

CONTACT - MIKE FARMER Tel : (0117) 274117  
VENUE - Bristol Maternity Hospital  
MEETS - 7th day of each month, or the Friday nearest to it if the 7th falls on a Saturday or Sunday

## CAMBRIDGE APPLE USERS GROUP

CONTACT - Ian Archibald Tel : (0223) 311177  
VENUE - Lloyd Room, Christ's College, Cambridge  
MEETS - Fortnightly  
NEWSLETTER - Published monthly

## CROYDON APPLE USERS GROUP

CONTACT - Graham Altwood Tel : (0181) 491-3333 BSG008  
VENUE - 515, Limsfield Road, Warlingham, Surrey  
MEETS - 7.30pm on the third Thursday of every month  
NEWSLETTER - Published monthly

## EAST MIDLANDS MAC USER GROUP

CONTACT - Nick Helm Tel : (0115) 271779  
VENUE - Wilford Cricket & Rugby Club, Nottingham  
MEETS - 8.00pm on the 1st & 3rd Wednesday each month.

## EDINBURGH GROUP

CONTACT - Adam Gilinsky Tel : (0131) 557111  
VENUE - Proteus Micro Systems, 55, Frederick Street, Edinburgh, EH2 1LH  
MEETS - First meeting held on 12-11-86, probably bi-monthly after that. Check with Adam.

## ESSEX GROUP

CONTACT - Pat Bermingham Tel : (0465) 211111  
VENUE - The Y.M.C.A., Victoria Road, Chelmsford  
MEETS - Third Friday of every month

## FURNESS AREA

CONTACT - Alan Curtiss Tel : (01924) 511111  
There are currently no regular meetings in this area, when held they have been at the premises of a local dealer.

## GATEWAY COMPUTER CLUB

CONTACT - Robert D Hall Tel : (01634) 711111  
VENUE - Bob Hope Recreation Centre, R.A.F Mildenhall  
MEETS - Subject to some variation. November meeting will be a Family Computing Day on Saturday, 29-11-86. CHECK WITH ROBERT FOR TIME AND CONFIRMATION OF DATES BEFORE GOING ALONG. NOTE : Although the venue is on a service base it is not in a security restricted area so the club is open to interested parties.  
NEWSLETTER - Published monthly

## GLASGOW GROUP

CONTACT - Donald Davidson Tel : (0141) 277111  
VENUE - Proteus Micro Systems, 17, Park Circus Place, Glasgow  
MEETS - Three or four times per year, check with Donald

## HANTS & BERKS

CONTACT - Mike Hollyfield Tel : (01628) 711111  
VENUE - Thames Valley Systems, 128 High Street, Maidenhead.  
MEETS - 7.00pm on the second Monday of every month

## HARROGATE AREA

CONTACT - Peter Sutton Tel : (01423) 411111  
No active organised group in this area but there are a number of keen Apple users in contact with each other.

## HERTS & BEDS GROUP

CONTACT - Norah Arnold Tel : (0494) 371111 BSG009  
VENUE - The Old School, 1, Branch Road, Park Street Village, St Albans, Herts.  
MEETS - 8.00pm on the first Tuesday of each month

## KENT GROUP

CONTACT - Richard Daniels Tel : (01893) 271111  
VENUE - AppleCentre 5-11 London Road, Maidstone.  
MEETS - 7.30 p.m. Monday 26th January 1987

## LEICESTER GROUP

CONTACT - Bob Bown Tel : (0533) 471111  
VENUE - Shakespeare Pub, Braunstone Lane, Leicester  
MEETS - 7.30pm to 10.0pm on the first Wednesday of month

## LIVERPOOL GROUP

CONTACT - Irene Flaxman Tel : (0151) 411111 BSG021  
VENUE - 78, Victoria Road, Widness, Cheshire, WAB 7AR  
MEETS - Second Monday of every month.

## LONDON APPLE II GROUP

CONTACT - Chris Williams Tel : (01) 411111  
VENUE - St Brides Institute (temporary check with Chris)  
MEETS - Check with Chris

## LONDON MACINTOSH GROUP

CONTACT - Maureen de Saxe Tel : (01) 411111  
VENUE - Room 683, London University Institute of Education, Bedford Way, London, WC1  
MEETS - 6.00pm on the second Tuesday of every month.

## MACINTOSH USER GROUP

CONTACT - Patrick Winterson Tel : (0151) 411111  
VENUE - Formal venue now established.  
MEETS - Every three months.

This group is in the Cambridge area, if you are interested check with Patrick for details of their next meeting.

## MIDAPPLE

CONTACT - Tom Wright Tel : (01627) 711111 BSG019  
VENUE - I.T.E.C., Tildasley Street, West Bromwich.  
MEETS - 7.00pm on the second Friday of every month  
NEWSLETTER - Published monthly.

FORWARD PROGRAMME - December 12th : Games evening.

## THE MIDLAND MAC GROUP

CONTACT - Ivan Knezovich Tel : (0121) 411111 BSG014  
VENUE - Spring Grove House, Safari Park, Bewdley.  
MEETS - 7.00pm on the first Tuesday of every month

## THE NORTH WEST APPLE COMPUTER CLUB

CONTACT - Jim Rosco Tel : (01625) 271111  
VENUE - Horse & Jockey Pub., Winwick Road, Warrington  
MEETS - First Monday of every month

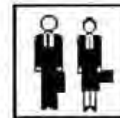
## THE NORTH WEST APPLE USERS GROUP

CONTACT - Max Parrot Tel : 061-236-3311, Extn 2055  
daytime : (061) 411111 evenings  
VENUE - Staff House ( 2nd floor ), University of Manchester - Institute of Science & Technology, P.O Box 88, Sackville Street, Manchester  
MEETS - 8.00pm on the last Thursday of each month.

# LOCAL GROUP NEWS



This is a regular feature of your journal and Tom Wright our Local Group Support Executive would be pleased to hear from any local group organisers or any member who wishes to start a local group.



The hectic period covering preparation for Appleworld restricted the amount of time available for contacting local groups by telephone but happily the show itself provided me with the chance to meet some of you and I found the experience most enjoyable and rewarding.

In the last column I apologised for providing an inaccurate telephone number for the Bentwaters group on the Force listing, this time I'm apologising for providing the wrong one in the last column. I was able to apologise in person to John Thomas at the Appleworld show and luckily for me he turned out to be a very understanding sort of chap, my doctor tells me that my bandages can come off in another two weeks.

I'm happy to report that the number of local groups in our listing is still growing with both the East Midlands Mac User Group and the brand new Edinburgh Apple User Group being welcomed to the column for the first time, the new contact for the Kent group (Richard Daniels) is also now available. There must still be more groups out there so let's all hear about them folks.

For the benefit of members who have joined us recently it's worth restating the aims of this column: (a) to help local groups advertise themselves. (b) help all Apple users to identify their nearest local group. (c) help improve communications between groups and members. (d) where appropriate, give advice to local groups on organisation, venues, topics, etc. In short the column is part of Apple2000's increasing efforts to help members and local groups meet and benefit from the common pool of knowledge and experience, as well as have some FUN.

Although the majority of the listed groups are run by Apple2000 members they are not controlled by Apple2000, each group is an independent entity. I do however freely admit to a personal desire to see an Apple User Groups federation develop during the coming years, there is strength in numbers and the help that we give to each other can only be beneficial to us all. If any of you have ideas on this subject please let me know.

**EDINBURGH APPLE USER GROUP** - a new group which by the time this column appears will have held its first meeting on 12-11-86 at the premises of PROTEUS (Apple dealer), 55, Frederick Street, Edinburgh, EH2 1LH. The group is forming as a result of the initiative of Ron Gillespie (of Proteus) and Adam Gilinsky who expect to see about 15 enthusiasts at their first meeting. Ron is very enthusiastic about the groups formation and he has also arranged the Glasgow groups use of Proteus new premises in Glasgow as a venue for that groups December meeting. At present it is likely that the Edinburgh group will hold bi-monthly meetings but they may also have a social event around Christmas time. Contact for the group is Adam Gilinsky, Tel (011) 555 5555, please check with him before

going along to a meeting. Congratulations on the initiative and best wishes to the group.

**EAST MIDLANDS MAC USER GROUP** - has approximately twenty five members currently although the average attendance at meetings is ten. The group has been operating for about two years and is one of two groups (the other being an Amstrad group) which have evolved over the years from what was originally a TRS-80 club. In common with most other groups the members have a wide range of background and interest including professional programmers, business, and leisure users. There is no formal structure to group evenings, the main objectives currently being to exchange information and enjoy the evening. No newsletter is published currently although they did have a "one-off" publication some time ago, the groups close relationship with MacTel may be the reason for not having a newsletter. A feature of the club which is absolutely certain to appeal to everybody is that there are no subscriptions or attendance fees. The group has attracted people in the past from Stockport, Derby and Hinckley and they offer a welcome to all Mac users.

**KENT APPLE USER GROUP** - the new contact for this group is Richard Daniels who has arranged the revival meeting for 7.30 p.m. on Monday 26th January 1987 at the AppleCentre, 5-11 London Road, Maidstone. It is planned to alternating meetings between Maidstone and Margate. Nice to see things near to settling for users in the Kent area, give Richard a ring to find out more about the groups plans.

**BENTWATERS APPLE USER GROUP** - I enjoyed meeting some members of this group at Appleworld, a very friendly bunch, if you're in the Bentwaters area I'm sure that you would enjoy their companionship. The group has been operating since last October and has a membership of about twenty. A new meeting format was adopted at the October 14th meeting which included two presentations, one on the Apple IIGS by R. Piazzoni (Pz to his friends) and one on communications by Don Echelberger (who apparently crammed a twenty minute presentation into forty five minutes). The November 11th meeting format included three presentations, Wordstar, Applewriter II, and games. Billy Keeling is trying to compile a list of Apple dealers, repair centres and general suppliers so if you know of any that might be of interest to the group please contact them.

**GATEWAY COMPUTER CLUB** - was established three years ago as a multi-interest club. Members are drawn from the areas around Mildenhall and Lakenheath with some travelling from Cambridgeshire and Norfolk. Current membership is one hundred and ten but rises higher on occasion as service personnel are rotated. In addition to the clubs monthly meetings there are monthly meetings for Special User Groups for the Apple II series and the Apple Macintosh, a monthly newsletter (Gateway Gazette) is published. The annual membership subscription is £5.00. Expertise within each of the Special User Groups is described as ranging from the novice to hardware hacker, programmer and circuit card builder, sounds like a clever

lot whose companionship would be a valuable asset to any Apple user (wonder if we can get some of them to share their knowledge through the Apple2000 magazine?). Anybody interested in the group will find a warm welcome.

**CROYDON APPLE USERS GROUP** - change of venue for the Croydon group as follows 515, Limpfield Road, Warlingham, Surrey. There were several enquiries at Appleworld about group opportunities in this area so the group may soon see some more new faces.

**CAMBRIDGE APPLE USER GROUP** - a change of both name and venue for this group which was previously known as the Cambridge Apple2000 Club (which results in them also becoming the second C.A.U.G. on our listing). Meetings are currently held in the Lloyd Room, Christ's College, Cambridge, and there will also be a venue change during the winter months. The group elected officers at their first formal meeting on 16-10-86 and also established a £5.00 annual subscription with a £0.50 attendance charge for each meeting (to cover essential fuels such as coffee). I have received a copy of the group's first newsletter which includes a section on new Apple products and programs as well as a BASIC listing for a mini catalog lister. A very nice touch is the ancient (1976) Apple advertisement on the back page.

**MACINTOSH USER GROUP** - Patrick Winterson tells me that the group now has about twenty five members which sounds as if they are firmly established. They held their first formal meeting at the premises of COMPUTER ONE during the week commencing 20-10-86 and have decided to hold formal meetings at three monthly intervals. In the intervals between formal meetings members will be exchanging information via mail, telephone and informal gatherings.

**THE MIDLAND MAC GROUP** - the West Midlands Centre of magical, mysterious, multifarious Macintosh machinations, at least I think that's what Ike said. Offerings from the Appleworld show were reviewed at the group's last meeting. The next meeting which is on the first Tuesday in December will include a private Christmas inebriation to which all Apple2000 members are welcome. A special Mazewars plus session is being planned for this meeting so bring your Mac along for the biggest participation Mazewars EVER !!!

**LONDON APPLE II GROUP** - St Bride's Institute is still in use as the club's meeting place, but a new venue is being sought. Chris Williams describes St Bride's as being near Blackfriars Bridge at the Ludgate Circus end of Fleet Street, so if that area is suitable for you give him a ring and he'll tell you how to get there. The group usually meets on the first Wednesday in each month and if you are interested you should check with Chris before going along to a meeting. Several people have enquired about the group recently and it sounds as if the enquiries might result in more members.

**THE NORTH WEST APPLE USERS GROUP** - includes members with Apple interests and some with I.B.M. look-a-likes. Although the club normally meets at 8pm on the last Thursday of each month the December meeting is usually the last Thursday before Christmas. First attendance is free, members pay £2.00 per attendance there is no annual membership fee.

**MIDAPPLE** - we welcomed a new member at the October meeting which included Hairy Bodger (alias Harry Gardiner) demonstrated and discussed Format-80 Scientific, Microl Basic benefited from Dave Ward's presentation and the game SPY-v-SPY was demonstrated by Chris and Kevin who must be the youngest software demonstrators in any club. In November we saw Apple U.K. demonstrating new Apple products. Looking ahead there is a Games evening on 12th December, Word Processors on 9th January 87, Communications on 13th February 87. All Apple users will find a welcome.

**HERTS & BEDS GROUP** - Communications was the subject of the October meeting which began by Keith Chamberlain demonstrating Data Highway on the Apple II and dialling into The Force. Then Gordon Adams demonstrated comms applications on the Macintosh by dialling into MacTel and The Source. The November meeting's subject was the Apple IIGS. Bob Sather of Dark Star brought a IIGS along and started off by giving a thorough introduction to the hardware. 'The battery,' said Bob, 'lasts ten years. In ten years time we will be getting computers like this in our breakfast cereal, probably so small that we will have to pick them out from beneath our fingernails.' He went on to show many of the applications being prepared for the GS and some of the best known Apple II software running on it too.

**GLASGOW APPLE USER GROUP** - will hold a meeting at 7.30pm on 3-12-86 at PROTEUS MICRO SYSTEMS, 17 Park Circus Place, Glasgow, the evening will be one of informal discussion and presentation. Twenty group members are now listed for the group and there must be more in the Glasgow area so let's see you folks ! Donald Davidson has already made contact with Ron Gillespie in Edinburgh and I don't doubt that the two groups can usefully arrange joint sessions in the future. All Apple users are welcome to join in the Glasgow group, please contact Donald for more detail.

**LONDON MACINTOSH GROUP** - a very active group which was formed in January, 1986 by a nucleus of Apple2000 members, more than one hundred members are now listed. Annual subscription is £6.00 and there is an attendance fee of £1.00 for each meeting. Members of the group have access to a helpline, software library and other facilities in addition to the monthly meetings. The forward programme includes The University Consortium on 9-12-86, and a combined A.G.M. and Workshop on 13-1-87. For their October meeting the members were invited to the Apple Centre, Knightsbridge, where they were made most welcome by the staff. Several members of the group gave demonstrations of applications with which they were familiar.

**HANTS & BERKS GROUP** - there is a new venue for this group which now meets at Thames Valley Systems, 128, High Street, Maidenhead. Anybody in the area will find a warm welcome from the group's members, meetings usually find about sixteen people present although there are other members who turn up at intervals.

**LIVERPOOL GROUP** - this group meets on the second Monday of every month at Computer City, a venue with a name like that must attract interest quite apart from an opportunity to meet other Apple enthusiasts. Go along and meet them I'm sure you'll enjoy yourselves.

I hope that none of you missed Steve Wozniak on the Equinox programme, one of the things that I learned from the programme was that I.B.M. really stands for " I Build Macs " ! Don't forget to let us know of any groups that we haven't got listed yet and if you're thinking of starting a group get in touch we may be able to help in some way. Wouldn't it be nice if Apple U.K. organised an Apple show further north to help the many Apple enthusiasts in Scotland and the other northern areas who are otherwise faced with round trip journeys of seven or eight hundred miles. Although I understand that the dealers all did good business at Appleworld I also think that it would be nice if the next show is less " clinical " in general atmosphere. My thanks to everyone who has supplied information for this issue. 🍏

**I HOPE YOU ALL HAVE A MERRY XMAS AND  
A PROSPEROUS NEW YEAR.**

Keep out of the Red with

# BOOKKEEPER II

Do you have a problems with keeping your accounts or require management analysis figures to assist in keeping a better financial control of your accounts?  
Then this program is for you.

## What is BOOKKEEPER II ?

**BOOKKEEPER II** is a simple-to-use, easily learned, reasonably priced method of keeping business books and control of expenditure and petty cash. Whilst practice makes perfect this program can be approached with confidence by someone who has never previously used a computer or has no "in-depth" knowledge of accounting, as simple non-accounting terms and instructions are used throughout the program. The program has been designed to keep a straight-forward, no nonsense record of a small business accounts, hence the name **BOOKKEEPER**. The **II** part of the name is because it runs on the Apple // range of computers.

## What are the features of BOOKKEEPER II ?

It can be used as a simple Cash Book by just entering the Cash In and Cash Out transactions to and from the Bank or Petty Cash accounts. If the Sales and Purchase control accounts are used then the outstanding debtors and creditors can be seen at a glance. There is the facility to produce VAT and Trial Balance reports, which can be used when completing VAT returns or to show profitability. Standing Orders can be stored for automatic entry to the Bank account and statements can be produced for any account, which will prove especially useful when reconciling the Bank account.

## Who will use BOOKKEEPER II ?

Small Businesses that wish to have a simple way of keeping accounts themselves, and have problems because of lack of time or even lack of understanding of accounts. Accountants who require an incomplete records system in order to produce a Trial Balance. Also large organisations can use the program as a Cash Book, for Petty Cash or for Trial Balances if used in conjunction with their Sales and Purchase Ledgers.

## What is required to run BOOKKEEPER II ?

An Apple //GS, //c or //e with an 80 column card. A minimum of two 5.25 inch floppy disk drives or one 3.5 inch Unidisk. The program will also run on any hard drive that supports ProDos. A printer with a compatible interface in slot one is useful although not mandatory as all reports will print to the screen.

## What are the limits of BOOKKEEPER II ?

The program will handle up to 99 Cash Book accounts, 400 Sales and Income accounts, 499 Purchase and Outgoing accounts and 30 Standing Orders. As many as 32,000 transactions can be stored providing the data storage volume is large enough. As a guideline a 5.25 inch floppy disk will hold about 925 transactions per period. A 3.5 inch Unidisk will hold about 9,370 transactions or 8,600 if the data is stored on the program volume. Monetary values may be used up to £999999 in all entries.

## What is the price of BOOKKEEPER II ?

**£99.00** plus VAT.

This includes a comprehensive manual, with the program supplied on both 5.25 and 3.5 inch floppy disks.

## Where can I buy BOOKKEEPER II ?

From your local authorised Apple Dealer or

**Advanced Micro Products Ltd.**  
200 Court Road - London SE9 4EW  
Tel. No 01 - 851 3311.

Apple, ProDos, Apple //GS, Apple //c, Apple //e  
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# The Force



And how to get the best from it!

By Ewen Wannop

First an apology. The Gremlins struck last month between my keyboard and the Editor's Pagemaker. I hope you were able to follow the article. There was a missing command instruction. It should have said that to use the \*MAILSAVE\* file you should enter message send, and at the TEXT prompt, issue: **LOAD MAILSAVE <CR>**

This was a case of my forgetting how the command I was describing worked. I had put this command in the text on a line by itself and then sent it to the Editor over the FORCE, of course it actually tried to work and load the file \*MAILSAVE\* as the text went out!

Following on from this, a bit of research has shown that the maximum linesize that can be set is **LINESIZE 1024**. This should cope with most text if you need to send long paragraphs. A carriage return will then be inserted by the Force at that point if none has been encountered in the preceding 1024 characters.

## How the Menus are written.

The FORCE menu is written in a language called CPL (Control Processing Language). It is fairly simple in its construction and looks much like Pascal or C. You can use it yourself on your own mailbox if you wish. All that is needed is to name any file that uses it with the suffix '.CPL'. I cannot give you a definitive guide to the language, as even BTG do not have a manual. The following simple program shows how it works, and is a useful little program to log off the FORCE, show you any unread mail and delete your \*MAILSAVE\* file at the same time.

First enter the Editor:

>ED <CR>

INPUT

```
MAIL QSCAN UNR <CR>
&IF [EXISTS *MAILSAVE*] &THEN &DO <CR>
  &DATA DEL *MAILSAVE* <CR>
  &END <CR>
&END <CR>
OFF <CR>
<CR>
EDIT
SAVE OFF.CPL <CR>
```

>

To use this little program, <Q>uit the menu and:

>RUN (or R) OFF <CR>

A quick scan of your mailbox for unread mail will be made. If any exists you can deal with it. If none exists, or when you

<Q>uit, the \*MAILSAVE\* file will be deleted if it exists and you will leave the FORCE. This will save any storage involved with \*MAILSAVE\* but the program will of course take one block of storage itself.

If you want to see more of the CPL language, you can look at how the Menus are actually constructed. I explained last month how to 'Attach' to a mailbox by >A BSG999. This will only work if the mailbox has been setup so that outsiders can attach to it. The BSG000 box has been setup in this way so you can all run the menus. At logon, you are in effect attached in this way and the main Menu, a file called **MENU.CPL**, is run. To have a look at these files, leave the Menu 'Q', and when you see the Gold prompt '>' type: **A BSG000**. You can now issue an 'F' to see the many files we have there. Any of these marked with an 'r' at the end, can be 'TYped' out for you to see. Select one and then **TY FILENAME.CPL** to have a look. You will not be able to write to these files or delete them, as they are protected, but you can at least have a look. To return to your own mailbox, type 'AL', or attach local.

If you feel like being a SYSOP yourself, then write some menus for your own mailbox, change your **PASSWD - LONG** so that others may attach and then all they need do is run your Menu program to be on your own mini-Force. Follow the construction of the menus you see on BSG000 and away you go.

Whatever you do, the security of your own box is preserved, as only files marked with an 'r' can be read or run by outsiders. Use the **PROT FILENAME 7 1** command to set them up in this way. Rest assured your mail will be well protected, even the SYSOP cannot see your mail and he has much greater access rights than anyone.

## Storage and all that

There is still some concern amongst members of the Force that their storage charges are too high. Unread mail will not be charged for a period of a month or so, after which it is filed and you will start paying for it. Read mail that has not been deleted will be put into a file called **MAIL.FILE**, as will any filed mail. This of course attracts normal block storage charges. To keep your storage charges to a minimum, delete mail and filed mail once you are done with it. Delete any other files except **NUMB** and \*TELEX\* if you have that facility. I am planning a Utility menu to do these things for you and it may well be installed by the time you read this.

To see the true state of your storage, type >STORAGE or >STORAGE -L. If you are unclear what it all means, type >INFO STORAGE or >INFO TELEX STORAGE to get an explanation.

This leads me on to the things you can do with mail, files and the editor. You will all have seen the NEWSBYTES area on the Noticeboard. These entries are sent to me as normal messages. I first read them to see what they are and then at ACTION REQUIRED I type SAVE NEWS. This saves them as a file called NEWS. I then need to transfer the file to PRPOST. To do this I use one of the little known commands that you can use from the Gold prompt on the FORCE. It is a file utility called FUTIL that allows us to transfer files around the whole system much in the manner of the CPM program PIP. Type FUTIL to get the '\*' prompt. Here we can then enter \*FRO BSG999, \*TO BSG990 and then \*CO NEWS to first say where from, where to and then send the file where I want it to go. The \*TO command will only work if the destination mailbox has been setup for PASSWD -LONG to allow you access. I now ED NEWSBYTES and LOAD NEWS into it. The Prpost files are constructed in a special way so that the various parts are seen as separate messages. I can however edit a new header to mark this new addition as a separate message. Finally I SAVE back the amended file. This saves me the time involved in actually downloading and uploading the new piece as a normal entry to the noticeboard.

### Last Word

The membership of the Force is growing fast. Modems and Comms software is getting cheaper. We have two or three members who are in the Music business, they use the Force for their international dealings. The computer never goes to sleep! We reckon it is actually cheaper to send mail by the Force than to post a letter first class. Delivery takes some microseconds to achieve, worldwide, so we rightly name the humble postal service 'Snail Mail'.

Save the postage and send your cards by 'Mailboxing a friend for Christmas'. 🍏

## How to join the FORCE and what you will need.

The FORCE is a 'Closed User Group' operating on British Telecom GOLD and administered by Apple2000.

Only Apple2000 Members are permitted to join and the whole BTGOLD System is available to FORCE subscribers. This includes Telex, International Electronic Mail and many databases and of course our own large Apple Related Section. Some of the BTG services incur extra charges.

To use the FORCE you will need a Computer, a Modem, and Communications Software.

There is no joining fee to The Force or to the Telex facility. The basic monthly charge is at present £3.00 + VAT. You must then add the Packet Switching System Charges and your Online Time. The charges normally equal the cost of a Trunk Dialed Call. You will be billed each month for your usage.

You MUST complete the appropriate BT and Apple2000 forms before connection is allowed. Write for further details. 🍏

### IS YOUR EPSON PRINTER CARD A PROBLEM?

If you have an Epson 8132 printer card, you know that it won't work with AppleWorks, CP/M, Pascal, Ascii Express, etc. Don't despair:

The ImageMaker EPROM replaces the ROM chip on the Epson 8132 card to make it compatible with everything, and in addition gives your Epson card the graphics printing features of a Grappler Plus.

We also make ImageMaker EPROMs for the Super Serial and Cirtech (pre-Champion) Printer Cards, to add full graphics printing capabilities.

ImageMaker EPROM £25 + VAT

### NOW MOUSEPAINT CAN PRINT TO ANY PRINTER!

When MousePaint's 'Print a File' leaves you few options, take a look at MousePrintz.

With MousePrintz, you can magnify, stretch, crop, invert, flip, rotate, and shade your MousePaint screen image to your own specifications, then print it on virtually any dot-matrix printer. What could be simpler?

MousePrintz is a straight-forward patch program, designed specifically to enhance MousePaint's limited printing facilities. MousePrintz is fully documented and supports the Apple //c and 128K //e.

If you've ever been disappointed with your MousePaint graphic printout, MousePrintz is your saving grace.

MousePrintz £25 + VAT

### SCREENSNAPPER - TO PRINT THE GRAPHICS YOU CREATE

ScreenSnapper offers not only sophisticated text and graphics printing but adds new features to your Apple II+, //e and //c, that you would never have thought possible.

ScreenSnapper lets you interrupt your program, print the screen, and resume running the program. Intended primarily for use with your own Applesoft and machine code programs (or other unprotected software) running under DOS, ScreenSnapper is compatible with virtually all interface cards and dot-matrix printers, rendering the purchase of an expensive graphics printer card unnecessary. It includes all the screen-editing features of Mouseprintz.

ScreenSnapper adds an extremely useful extension to Applesoft Basic that provides graphics programmers with a complete set of commands for double hi-res plotting plus additional commands which access the ScreenSnapper on-screen utilities.

ScreenSnapper £30 + VAT

**darkStar**  
SYSTEMS

DARKSTAR SYSTEMS Ltd.  
78 Robin Hood Way  
Greenford Mddx. UB6 7QW

Phone (01)-900 0104 MicroLink ID: MAG20297

# Two Cards for the Apple II

By Tony Game

Computer Factory is a firm set up by an ex Apple engineer to produce a range of hardware for Apple computers. So far they are offering two cards which I have tested.

## Extended 80-Column Card for the //e

The extended 80 column card is a very small card, at five inches long, and holds 10 chips none of which are socketed. Now that chips tend to be so much more reliable, this is probably a good thing in that it eliminates the worries about corroded sockets which can sometimes cause such obscure problems. The card runs very cool indeed in use. It is well made with no evidence of solder splashing which is often a fault of cards in the cheaper ranges originating from the Far East.

There is very little to be said about the //e extended 80 column card, now that it is so very much a standard and all one can usefully say about this one, is that it does fully conform to the standard. I have tested it with a variety of software using double hi-res graphics and the full 128k of memory and it has performed faultlessly. I have used it with Applesoft, Pascal, ProDOS and CP/M, with the same results.

The text display is clear and legible and everything works as it should. This makes the card a considerable bargain at the price being asked, especially in view of the fact that it is made in this country and help would therefore be readily available in the event of any possible problems.

The thirteen page handbook is very well produced with excellent typescript which explains how to fit the card into the computer, it also contains a very clear description of its use and of the extra control commands that are available and required (it is much clearer than Apple's manual).

The card comes with a full year's warranty and is heartily recommended.

## Real Time Clock Card

The real time Clock Card is the same size as the 80 column card and incredibly holds just five chips plus a rechargeable battery. Only one of the chips is socketed.

The workmanship is first rate and it is obvious that no corners have been cut. The battery is charged when the Apple is switched on and it is claimed that a full charge will take ten hours, a fully charged battery will run for three months.

The card is accompanied by a double sided diskette which contains all the ProDOS utilities on one side and those for DOS and Pascal on the other.

I found the biggest feature of this card is its full support of ProDOS, which is not the case with many cheap clock cards originating from the Far East. All the other cards with this support that I have seen advertised cost considerable more.

As ProDOS comes to be used more and more this is obviously now an essential requirement in a real time clock. Appleworks users will find it very useful to have the date and time against their files. The way in which ProDOS is set up to read the clock is by the use of an additional .SYSTEM file which is automatically read by ProDOS before the BASIC.SYSTEM, or whatever the second .SYSTEM file is and which sets the pointers up to read the clock. Once this file has been copied as the first .SYSTEM file to a disk nothing further will ever need to be done.

There is another file called INSTALL which can be used to set up the clock just for the one boot by typing -INSTALL, but one would obviously only use this for experimentation. The time and date are set by a very elegant hi-res program which also acts as a time display and is very easy to use. The clock does not display milliseconds.

The card is fully interrupt driven and a very useful example program is included which displays the time in the top right of the screen. Clockon sets this up and Clockoff disconnects it. This program, as is the case with all the programs, serves as a demonstration of how the facilities are used.

For those still extensively using DOS 3.3, there is a most useful program to alter DOS so as to stamp files with the date and time as under ProDOS. This uses a program called GENDOS, which can be left memory resident or made to permanently change the DOS on a diskette so that it will be available everytime the diskette is booted. Having visible proof of which is the latest of a number of files is often an incredibly useful facility as anyone who has left a program in development saved under a number of different names will know! The only snag with this program is that it prevents the use of any of the fast DOS's. At least I was not able to make it work with any of them but no doubt patches could be found.

A very useful feature is the facility to emulate other clocks, notably the Thunderclock and Mountain Hardware Clock. This works well under Applesoft and ProDOS, but I could not get a copy of Visidex, which expects a Mountain Hardware Clock, to recognise this one. Another possible limitation might be that the Mountain Hardware clock uses milliseconds which this card does not.

The Pascal implementation is very full and consists of four assembly language files which can be declared EXTERNAL and linked. They allow very complete use of the clock in Pascal programs. Additionally, if the clock is in slot 2 it can be read from, or written to, as the standard serial device.

The manual has 24 pages and is well written. No-one should have any difficulty in using the clock to full advantage after very little study. At the same time the advanced user has plenty of information to allow him to program the clock at machine code level. The type face is clear and I am impressed with the quality of the manuals for both these products.

The only clock cards that I know of offering the facilities of this one cost nearly half as much again thus making this a considerable bargain, especially since it is made in this country and has a year's warranty. It is heartily recommended. 🍏

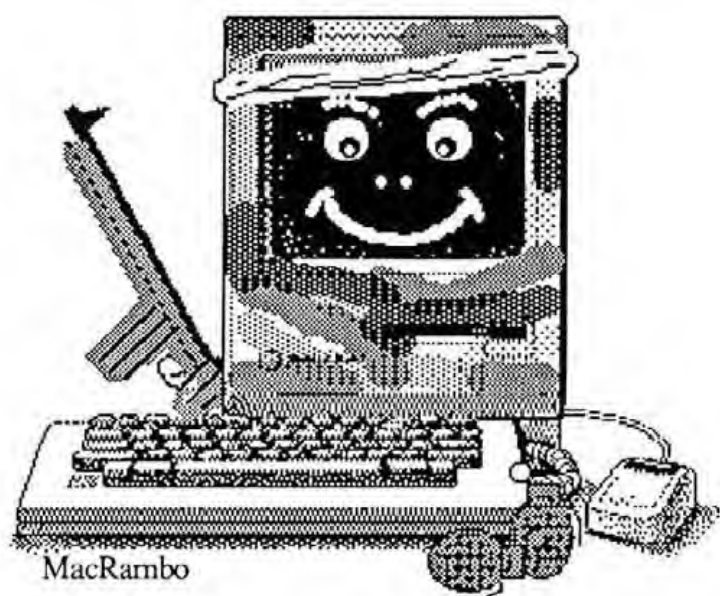
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# GETTING INTO SHAPE WITH YOUR APPLE

Allan Boardman and Graham Keeler

Department of Pure and Applied Physics, University of Salford

In this article, which will be continued in the next edition of Apple2000, we shall try and outline how it is possible to set up shape tables in the Apple II in order to draw user defined shapes very rapidly and if desired repeatedly, on the high resolution graphics screen. We shall also describe the commands involved in their use and particularly the limitations of the SCALE command. At the end of the article we shall list a program which takes the hard work out of setting up shape tables and will enable you to rapidly create tables of complex shapes, if you wish. This program first appeared in Graham Keeler's book 'Getting the most from your Apple IIe/IIc' published by Addison Wesley.

## What is a shape?

The ability of the Apple II to produce shapes, in addition to the conventional features of high resolution graphics, is a very powerful feature that considerably enhances the visual communication between the user and the computer. In high resolution graphics mode an area of the VDU screen is set aside for drawing. This area is physically an array of tiny rectangular blocks called pixels (short for picture elements), each of which can, on a command, be lit up individually or in sets. A set of such pixels defines your shape.

One of the simplest shapes to consider is a square. The fundamental square shape is, in fact, a set of four adjacent illuminated pixels i.e.

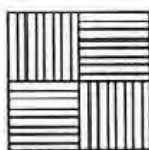


Figure 1

This shape and indeed all shapes, can conveniently be thought of in terms of what we will call vectors, that can be one of two types: plotting or non-plotting. A plotting vector, symbolically drawn here as a dot with an arrow head, has the following action on a pixel:



Figure 2

where we imagine the head of the 'arrow' to lie on the next UNLIT pixel and the tail (or dot) corresponds to an ILLUMINATED pixel.

Furthermore the arrow must point either horizontally or vertically. The square can then be defined as:

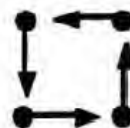


Figure 3

If we are generating a shape that requires non-plotting vectors then they are symbolically drawn as arrows without a dot, where again the arrow must be horizontal or vertical. Hence an arrow by itself corresponds to:

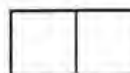


Figure 4

with both the head and tail of the 'arrow' lying on unlit pixels.

The significance of this representation is that it is the first major step towards the coding of the shape. It is also a fundamental step towards understanding just what are the limitations of the manipulation command SCALE, but these will be dealt with later on. For the moment let us concentrate on the fact that our square is made up of PLOTTING vectors, i.e. vectors that indicate a drawing movement horizontally or vertically and that leave a lighted pixel behind them. As we stated above, for other shapes this may not always be what we want, since we may not wish to leave a lighted pixel behind.

## Coding the shape

A very simple binary code has been devised to represent these vectors, consisting of three-bit numbers. These numbers have the following structure:

Movement	Plot	Non-plot
Up	100	000
Right	101	001
Down	110	010
Left	111	011

where the two right-hand bits of the binary code define the movement i.e. 00 (up), 01 (right), 10 (down) and 11 (left) and the left-hand (most significant) bit determines whether the vector is plotted or not.

The way in which this information is organised is now logical, if it is remembered that the computer memory is

organised into bytes and that a byte has eight bits, each of which can be set to either 0 or 1. It makes sense, therefore, to enter the shape into the computer memory a byte at a time. Now the shape vectors appear to have three bits so, at first sight, it would seem that we cannot get sets of three into eight without having a bit left over. This is essentially correct; most of the time the bytes contain two plotting vectors. Non-plotting vectors, however, have 0 as their most significant bit so, if we can arrange it, we can pack non-plotting vectors into the last two bits since in 001, for instance, the left-hand zero can be ignored. A shape, then, is packed up into a set of bytes and an individual byte will look like this:

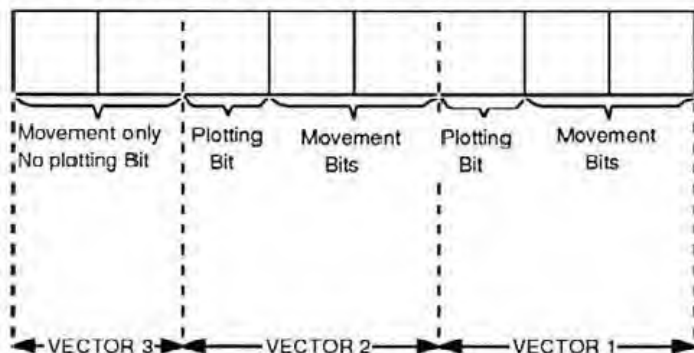


Figure 5

The vectors for the square can be packed into only two bytes since there are only four plotting vectors but we must have a way of terminating the byte list of the shape. This is signalled by a null byte. Thus the list of bytes that represent the square (i.e. its shape table) is:

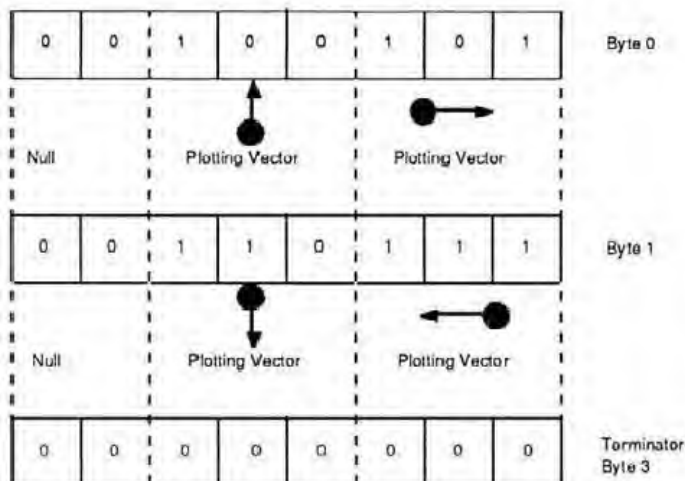


Figure 6

One word of warning is needed in relation to the combination of bits into shape table bytes. The computer ignores all null elements on the left hand side of the byte, which is how we can ignore the left hand two-bit element if necessary. However, this also applies to the three-bit elements, so it is essential that the last vector ANYWHERE in a byte is NOT a non-plotting 'up' vector. This is clearly a problem if you wish to move upwards without plotting. Avoiding this movement where possible is the simplest solution, but if it is essential, the only method is to move two up then one down, to give an effective move up one pixel, with the binary code 10 000 000.

## Entering shapes into the computer

Putting these bytes into the computer may be done from the Monitor, or in BASIC through POKE statements. Either way, these 8 bit binary numbers must be converted to another number system. To work from the Monitor we must convert to the hexadecimal system and to work in BASIC we need to convert to ordinary decimal. The conversion process can proceed along whatever route the reader wants but it is useful to know that a simple conversion to hexadecimal is obtained by using four binary digits at a time working from left to right. Hence 0010 0101 (binary) = 25 (hexadecimal) = 37 (decimal). The program listed at the end of this article (which will be in the next edition of Apple2000) does the appropriate conversion automatically, but if you wish to practice by hand you may need to refer to the conversion table below.

Binary	Hexadecimal	Decimal
0000	0	0
0001	1	1
0010	2	2
0011	3	3
0100	4	4
0101	5	5
0110	6	6
0111	7	7
1000	8	8
1001	9	9
1010	A	10
1011	B	11
1100	C	12
1101	D	13
1110	E	14
1111	F	15

The square is thus encoded to 25, 37, 0 (hexadecimal), or 37, 55, 0 (decimal).

## Shape table directory

The properly encoded shape (i.e. the shape table) is now ready to be entered into the machine but, before this can be done, the computer needs to know how many shapes are coming and where the shapes are to be found in your list. This is done by making up a directory that is also entered into the computer as a sequence of bytes. The first byte contains the number of shapes used, while the second is a null terminator. Hence the top-end of the directory is:

Byte number	Content
0	Number of shapes in the list
1	Null

This is followed, immediately, with the positions of the shapes in the list. The positions are given as relative addresses (i.e. the offset from the top of the directory) and take the usual form of a two byte hexadecimal number, with the low byte given first. Thus, if we only have one shape, it would normally be listed immediately after the directly headings so it must begin at \$0004. Hence for the square the complete shape table with its directory is:

	Byte No.	Value
	0	01 (One shape in list)
	1	00 (Null terminator)
relative address of the shape	( 2	04 (low order byte first)
shape table proper begins at position 0004	( 3	00 (high order byte second)
	4	25 ) (the square, in hexadecimal)
	5	37 )
	6	00 (Null terminator)

With this systematic approach we can have as many shapes as we can find room for in the machine and all can be entered in this way. Each succeeding shape will begin at a new hex position and this position will need to be added to the directory. If you anticipate adding extra shapes in the future you should leave plenty of spare capacity in your directory. Failure to do so can result in a lot of extra work since a complete rescheduling will be required.

Placing the Shape Table and its directory into the Apple is not too difficult, provided it is remembered that a careless introduction may place it in quite unsuitable memory locations. The safest places to put the shape table in memory are either immediately underneath DOS, with HIMEM: reset below the table, or for reasonably short tables the free area on page 3. To locate the table beneath DOS, type in:

**Y = PEEK (116) \* 256 + PEEK (115) - X**

where X is the length of the shape table plus directory; this will give a value Y. Typing:

**HIMEM:Y**

will reset HIMEM and protect your shapes. If you envisage an extension of your shape table it is probably better to set HIMEM to a value a little lower than Y.

The Apple is now ready to receive the shape table and its directory. If you plan to enter the shape table from the Monitor then CALL-151 enters the Monitor and you then specify the starting address for the table followed by a colon and then all the bytes (in hex) for the directory and table proper. If for example you choose a starting address in hex of \$9000 then for the square you would type in:

9000:	01 00 04 00	25 37 00
starting address	directory	square shape

The memory range \$300.3CF (hexadecimal) is also available to the user. It is completely safe but only put your shape table there if it is sufficiently short. As an alternative to working from the Monitor, which gives you direct access to the memory of the computer, you may use a series of POKE commands. A POKE command places a byte of data in a particular memory location with the format:

**POKE <memory location>, <byte of data>**

Hence if the range \$300.3CF is used, corresponding to 768-975 in decimal, we would POKE in the square shape as:

```
POKE 768,01
POKE 769,00 Directory
POKE 770,04
POKE 771,00
-----
POKE 772,37
POKE 773,55 shape table for square
POKE 774,00
```

If instead we choose to place the square shape at \$9000 this is 36864 in decimal so the POKE commands are POKE 36864,01 and so on.

### Saving and loading a shape table

Saving and loading are quite simple and use the binary file commands BSAVE and BLOAD. For the example of the square, the shape table can be saved by the command:

**BSAVE SQUARE, A\$9000, L7**

starting address	length of complete shape table
------------------	--------------------------------

At any future time the shape table and directory can then be loaded back into the Apple from the disc by the equally simple command:

**BLOAD SQUARE [,A new address]**

where the square brackets enclose an optional parameter that can be ignored unless you wish to place SQUARE at a new address.

Before a shape table and its directory can be used, however, the computer needs to be told its starting address. It will always look in memory locations \$E8 and \$E9 (232 and 233 in decimal) for, respectively, the lowest two and the highest two digits of the shape table address. If it happens to be \$9000 then \$00 goes in \$E8 and \$90 in \$E9 or, alternatively, 00 POKEd into 232 and 144 POKEd into 233.

The shape table is now ready for use and in the next edition we shall describe how to draw shapes from the table and present the generator program.



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# The Apple II GS Reviewed

By Graham Attwood

When Wozniak and Jobs designed and built the first Apple II computers, I doubt even they could have expected to see their machines running the immense range of software that has been written since then, nor I suspect would they have imagined the potential uses to which the Apple II computer has been put.

With amazing foresight, what they came up with was a design for the future, with potential for expansion, room for extra memory, with slots for cards to do almost anything; different processors, peripheral controllers, modems, colour, sound, and hundreds of others. The later IIe and IIC models built on these ideas and took advantage of the technology advances of the early 1980's.

Of all computers, the Apple II has been a machine for the USER. People bought Apples because they liked them and could adapt them to their way of working, and not for any reason of prestige or status.



The IIGS follows this highly successful formula, bringing the hardware up to date and adding many new features, but at the same time continuing the earlier emphasis on being a users' machine.

I imagine Apple could have designed a new dedicated 16 or 32 bit machine with a super-fast processor doing all sorts of amazing things, but that would have left all their existing customers with obsolete hardware and software, and no likely possibility of an upgrade path. Instead they have used an 8/16 bit processor (a derivative of the 65C02) which can run either in 8 bit mode for the existing II programs, or in 16 bit mode for all the exiting new software that is being written for the new machine. Not only that, but they have provided all the slots from the II so that most of those peripheral cards you bought for the II can be retained, and it is still your decision when to upgrade further.

Apple have produced this new machine as the successor to the Apple II line, and in the UK this machine will be the only II supplied, with the previous IIe and IIC machines being discontinued although they will still offer support to them for some time yet. The GS will be on sale in the dealers from December onwards and Apple tell me they will have good stocks by January. Apple (UK) are offering the machine in various 'bundles'

	1	2	3
CPU/keyboard/mouse	x	x	x
3.5" drive	x	x	x
Black/White monitor	x		x
Colour RGB monitor		x	
256K RAM card		x	x
HD20SC 20 Mb drive			x
SCSI card			x

All items can be bought separately but obviously are more expensive that way. In the USA there will be an upgrade option for the IIe since the motherboard is designed to fit both the GS and IIe cases and can use the IIe power pack and keyboard. Apple (UK) say they have decided against offering the upgrade in the UK and have instead opted for a very competitive price for the complete machine. My research indicates US prices of \$495 for the upgrade and \$999 for the CPU alone, compared with £995 in the UK for 'bundle 1' complete; it is a change to see for once the pound/dollar ratio in our favour.

The machine I have on loan for this review is as for 'bundle 2' with a second drive and a 1 Meg card. The equipment comes very well packed, and in the Apple tradition each item is provided with a well written operators' manual. Although these are directed at the newcomer to computing, they should still be read by us 'experts' otherwise you may miss vital information. An example of this is the key sequence to perform a 'cold-boot' which is the same as on a IIe - Open /Control/Reset - simple enough you would think, but its not just a case of prodding all 3 keys together and letting go. I wondered why it only worked sometimes, then read the manual to find I should press and hold Open  and Control, then press Reset and when the drive is running release the keys in the opposite order. It works 100% now!

**"With amazing foresight, what they came up with was a design for the future....."**

Apple include a reprinted Applesoft manual, but if more specialist or technical manuals are required there are eleven other reference and programming books listed in the Owner's Guide.

Putting the equipment together is quite straightforward as all the peripherals connect to the backplane of the machine into 'D' type or DIN sockets. Each one is different so you cannot plug the monitor to the drive socket by mistake. The keyboard is on an extensible cable and is very compact with a layout similar to the IIC, but with the addition of a numeric pad. I have heard criticism of it looking cheap and being too small for a professional machine; all I can say is that it takes some getting used to, but it has a good feel and I welcome the small size on a crowded desktop. The mouse plugs into it and can be set up right or left handed. It is much neater than the Mac one, and has proper slide surfaces so should last longer.

The new drives can be daisy-chained one to another, provided that any 3.5" 800K drives are in the highest priority positions. The numbering system for drives gets a bit complicated if you have a mixture of 3.5" and 5.25" drives on the disk port as well as Slot 6. Also the second 3.5" changes from S5,D2 to S5,D3 if the RAM disk is active. These drives (now standard for all Apple computers) are an improvement over the earlier Mac versions, and have of necessity been provided with a 'manual eject' button.

To fit interface cards you simply have to remove the top cover of the machine and take out one or more blanking plates from the backplane to let the ribbon cable through. Apple recommend fitting a fan (which clips to the power unit) if more than 3 extra cards are installed, and I would agree with this. Not that the motherboard or RAM card generate much heat, but the power unit runs very hot and there is only limited ventilation because of the metallic r.f interference screening surrounding the board. Any number of cards can be used but each one parallels one of the built-in ports so there is no point in having cards in those slots for which you are always going to use the ports.

Most Apple // or II cards work, but you will not need an 80 column or colour card, and small RAM cards are not worth fitting. Below is a list of the seven built-in ports and my recommended alternative slot usage.

Port	Slot	Device
serial printer	1	parallel/serial card
modem	2	serial card or modem
on-board 80 col	3	(non-80 column only)
mouse	4	drive, RAM or Z80 card
disk drives (S5)	5	drive card
disk drives (S6)	6	drive card
Appletalk	7	RAM or Z80 card

When Appletalk is required it plugs into the printer or modem port but appears to be a slot 7 device not slot 1 or 2; you cannot have all three on-line at the same time.


## THE RAM CARD OPTIONS


The Apple RAM card for the IIGS is a totally new unit designed for the new machine, and is not related to earlier Apple or third party cards that fit in the conventional slots. In fact it has its own slot and it is this memory area which is specifically used for true 16 bit operation. It is the only one of its type available at the moment, but several manufacturers are known to be designing their own variations.

Apple supply a 256K card with the 'bundled' machines, and this is provided with chip sockets for expansion up to 1Meg at a later date if you want to. On the optional 1Meg card the chips are soldered rather than socketed, probably a better bet for long term reliability.

These 16 bit RAM cards are not visible to the old 8 bit software, but of course the IIGS has 256K of motherboard RAM anyway and you can always use your existing Flipper or similar card in one of the 7 slots if you want more memory to run your software in //e mode.

The extra RAM can be used in two ways, either as additional memory space for resident programs, or as a RAM disk which gives very rapid access to files once they are copied to the card from the floppy drive. Setting up the RAM disk is

easily done by opening up the Control Panel using the commands (Open  - Control - Esc) and choosing from the menu. The amount of RAM set aside can be selected in 32K chunks from nil to the maximum size on the card.


You have to remember that changes in the RAM disk size only come into effect after turning the machine off for 20 to 30 seconds and then switching on again. A cold start using the (Open  - Control - Reset) does not do the trick and can lead to unexpected problems, since the Control Panel looks at first sight to be set OK.

Another important point to note here is that the new 16 bit programs are going to be considerably larger than earlier software because of the extra code needed to handle the super high resolution screen and to control the mouse driven desktop. Both of these features are likely to be used for almost all applications and will need the RAM card area for program storage. Most of the demo software supplied with the machine would not work with the card removed.

As the price and availability of very large RAM chips improves there will be cards around carrying 4Meg, 6Meg and even 8Meg of RAM. Quite what you do with this amount of memory is anyone's guess; I hope it does not lead to sloppy programming just because memory is so 'cheap'.

## THE CONTROL PANEL

One of the important features of the IIGS is the Control Panel which lets you customise the machine to the way you want it to work.

The Control Panel is accessed by pressing 3 keys together (Esc, Control and Open ) being interrupt driven this option should be available at any time. Unfortunately I found some programs disable the interrupts and others that use them do not seem to reset them, leaving the Control Panel inaccessible from the keyboard. I think the problem should be resolved in the future if software writers follow the developers' guidelines and make use of the 'tools' provided by Apple.

The purpose of the Control Panel is to set the machine to your own configuration, to suit your taste in screen and text colours and set up the ports/slots to match your own combination of cards and peripherals. Once set, the information is stored in a special RAM chip which (together with the on-board clock) is backed up by a battery so the machine comes up the same way the next time you switch on.

'Display' allows for a monochrome or colour screen and 40 or 80 column display on start up. If colour is available then any of the 16 standard colours can be chosen for the text, background and border, although only certain combinations are pleasant to work with. The default setting of white text on a blue background is a pretty good compromise and is a menu option if you get lost.

'Sound' sets the volume and pitch levels for the single bit 'bleep' output, and this also controls the output level of the synthesizer chip.

'System Speed' puts the system clock into normal 1MHz mode for speed sensitive operations, or fast 2.8MHz for everything else including 16 bit programs.

'Clock' sets the time and date of the on-board clock.

'Options' relate to the customising of the keyboard and desktop ancillaries. There are 8 languages for different countries and 9 keyboard layouts to choose from, so if you fancy wordprocessing in Danish on a Dvorak keyboard this is

the machine on which to do it.

'Slots' is where you decide which ports or slots are to be active. Although Apple have thoughtfully provided 7 slots as well as an equivalent number of input/output ports this is strictly on an either/or basis. For instance, if you have a serial card in slot 2 you cannot have that active at the same time as the modem port. This may seem like a restriction but in practice I found that you could always find enough slots for your cards; after all you have at least as many as on the //e.

'Printer Port' and 'Modem Port' are identical except that the default settings are aligned to the different baud rates and handshaking required. In fact the ports are interchangeable if you want to, but bear in mind that some software expects to find its output device in a specific slot.

'RAM Disk' lets you partition the RAM card into a RAM disk (default/RAM5) and program expansion area up to the maximum capacity of the card. A RAM disk set too big can leave insufficient room for the program to work in, and will cause the program to crash during booting up; if you need 1Meg of RAM disk you should be thinking of buying a hard drive instead.

All the above options except for RAM Disk take effect immediately on being changed, although it is probably best to go to the Control Panel as your first job when you switch on. To alter the RAM Disk size you have to make the change and then restart the machine. I found the recommended delay of 30 seconds between switching off and turning on again to be essential as it seems to take ages for the power to drain away from the memory card. A quick flick off and on that was enough on my //e will not do for this machine.

## SOFTWARE

Software is usually the key to a new computer's successful entry into the marketplace. Apple have made a good start with the GS by making sure it is compatible with a large percentage of the existing // software which should at least guarantee its acceptance by Apple enthusiasts. What will decide its ultimate success is the new 16 bit software, and what I have seen so far looks very promising. Some of these programs were very new, not yet even at the Beta-test stage, and were decidedly 'delicate' with little or no error trapping. Full working versions will be around by the time the GS goes on sale, and there are a lot of developers in the USA who have been writing new software for the GS over the past few months and that should be getting through to us quite soon.

The most visually exiting program so far is **GSPaint** which is mouse driven like MacPaint but with an amazing choice of colours and shades available from which to create your picture. The colours are selected from a 16 shade palette which can either be one from a palette library, or you make a new one on the colour mixing screen (an option from a pull-down menu). Colours can be sampled from a standard palette and then modified and placed into the working palette. A section of your picture is in view which you can temporarily paint on to test your newly created colour, and when you return to the main screen your modified colours are now present in the picture.

All the usually tools are provided for drawing, area filling, and 'fatbits' colouring of individual screen pixels, and there is a very useful 'colour find' option which flashes the areas of each colour pointed to in the palette.

If you have seen the demonstration pictures I am sure you will agree they are pretty impressive. As good as they are, they are only using 16 colours on the screen at the same time out of a potential 256, so no doubt there are even better graphics programs to come.

Apple have brought out version 2.0 of **Appleworks** which takes advantage of the GS's faster processor and extra memory, and now automatically loads the program to the RAM card leaving a desktop of 1140K with the big RAM card. They have also added mail merge to the wordprocessor options. This version only uses the keyboard, but I hear rumours of a mouse driven version being developed for the GS.

**Multiscribe** is a different type of wordprocessor, looking much like MacWrite with a choice of fonts, variable sizing and different styles, but all this with black, blue or red coloured type too. I believe it will print in colour on the Imagewriter 2 but I could not test this.

On a similar wordprocessing theme but incorporating simple graphics as well is **Graphicwriter**, a program for page layouts combining coloured text, coloured backgrounds or highlighting, and graphic drawing regions all on the same document. Not in the Pagemaker class, but certainly an interesting program even if the disk was marked 'Demo only'. I liked the touch of humour when I clicked the help option it printed Help!!! in the middle of the screen. I will be looking forward to seeing the finished version.

**Mousedesk** is a file handling system much like Finder on the Mac, but working under the new version of ProDOS. It is inevitably mouse driven and displays disks, files and folders by means of screen icons in much the same way as the Mac does. I found this program was a great help in organising files on a disk or moving files from disk to disk by simply selecting with the mouse and dragging to the new location, and all without having to know anything about ProDOS or typing in prefixes and pathnames. This type of utility is really necessary with the 800K drives as you can get an awful lot of say Appleworks files on 800K and if you do not put them neatly away into new folders (sub-directories) it can be quite a job finding a file when you need it. Also included are a disk formatter, and a whole disk copier which is much quicker than file to file copying. Incidentally I found that the latest ProDOS version of **Copy II Plus** partially worked on the GS (but not in bit copy mode), and I was able to salvage some files that got accidentally deleted from an 800K disk during a Mousedesk session. It recognised some of the drives and the RAM disk - I could fast load files to the RAM disk prior to running a program - and is easier to use than Filer.

For the sound and music enthusiast there is **Music Constructor Set** which displays a stave onto which you select and place musical notes and then play it through the speaker. My copy was a demo version and (wisely) did not allow me to save my masterpieces to disk, but there were 7 tunes already on the disk playing combinations of piano, percussion, banjo etc. and when put through an external amplifier were very realistic. The sounds in this program are generated by the synthesizer chip and played in real time. The alternative way of creating music on the GS is from digitally sampled sounds, and I was provided with a demo of a rock group which I could play through a Tape Deck program. The 30 second sample took up the whole of an 800K disk but the sound quality was just like playing a compact disk.

## WRITING YOUR OWN SOFTWARE

For the serious program developer the choice of language for 16 bit operation is between C and Assembler, with Pascal 1.3 as an unofficial third possibility, and these will have direct access to the Toolbox which programmers must use if their products are to be fully compatible. The occasional program dabbler can still write in Applesoft but the language is unchanged from the earlier II version and cannot talk to the Toolbox directly to take advantages of the new features of the GS. One way round the problem is shortly to be made available in the form of a suite of ampersand (&) utilities, much like Routine Machine. Another alternative will be new versions of Basic which have these calls as program instructions. Maybe the new Micol Basic will cover this area.

## A QUICK LOOK AT COMPATIBILITY

Dave Ward and I spent a day running the machine through its paces and checking out a whole range of cards and programs and generally we found that there were only a few reasons for things not working on the GS. With hardware it is mostly a question of timing variance between the clock frequency and the card - for example, some Z80 cards work, some do not. Another problem area is interrupt driven hardware which may find the GS handles the interrupts differently - we could not get Snapshot to behave. Most other hardware like printer cards, disk controllers and RAM cards performed without problems. The Flipper card work perfectly in any slot and could be partitioned into work areas which could then be switched in and out as usual.

Software problems generally fall into two categories, those that do not boot properly, and those that do not recognise the GS as equivalent to a //e. Protected disks are most likely to have booting problems; for example our Speedloader in its original unprotected form works without fault, and so do disks created with it; it is only the protected version which crashes. (We have asked Cornelius Bongers to look at the problem!) Some software for the II uses inverse characters which on the GS appear as mouse characters on the screen, the same as happens on the enhanced //e. A couple of programs did not switch screens properly and you need to go to the Control Panel to set the default screen.

A full investigation of compatibility of the IIGS is being undertaken by Apple2000 - see elsewhere in this issue for more details.

Apple IIGS

Part 2 of this report will be printed in the February edition together with reviews of some of the new 16 bit software which should be available by then. We will also have a report on our compatibility survey.

Steve Johnson of the 'Steve & Clive' Show demonstrates the Apple IIGS at the AppleWorld User Conference.



## GS Compatibility Study

Apple2000 intend to produce a study of ][+, //e and //c hard/software on the new machine. To do this we need your help.

We would like to hold a workshop somewhere in London in the next few weeks to try out as much kit as possible.

If you have any equipment or software and would like to help in this project please contact Graham Attwood a.s.a.p. to register your interest.

It is hoped that we will be in a position to publish our findings in the February Issue of Apple2000.

We are also compiling a IIGS Selector, this will be an updated list of products that are available for the new machine. You will see elsewhere in the magazine that products are being released in the USA for the new machine. We will keep you informed of what, how much and where to purchase these items.

Please address any questions you have to Graham Attwood and mark your envelopes IIGS.



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# Ramfactor Extended RAM Card for //e

By Ewen Wannop

It does not seem long ago that I added a 16K language card to my Apple II and amazed at the fact that I now had some 64K to play with. Every //e I am sure has now got an extended 80 col card to give the machine 128K like the //c. Memory has now become cheap, and many programs will only function properly with added memory of some sort.

I had read reviews of the FLIPPER, and had heard of RAMWORKS for the 80 column slot of the //e. RAMFACTOR is a sister card to RAMWORKS, and is a large memory card for the II+ or even any spare slots you might have left in your //e. It was not till I actually used one, that I realised how indispensable they really are.

In the old days, clever things were done to page in memory on the first memory cards to appear. I have a 128K card that works in this way. It was also possible to use these smaller cards as pseudo discs, but you had to use a modified DOS or PRODOS to make them work. The newer, larger cards, are made intelligent and constructed in such a way that Prodos, Pascal and DOS 3.3 can see them without modification. Under Prodos they will appear in their slot as a volume named /RAMS, where 'S' is the slot number. You can use them in every way just like a normal disc, but with the advantage of a very much larger storage capacity.

This extra size really comes into its own when used with programs like Appleworks. On boot this comes up with a desktop of 1012K! In fact if you are prepared to sacrifice some desktop space, you can put the whole of Appleworks and Pinpoint and its accessories onto the one card, and still have space left over for your files. Access to the card is considerably faster than to disc, and is more or less instantaneous in use.

I was able for instance to put my assembler Merlin, 120K of source files, and then assemble this down to a 24K program all within the same disc, and still have some 750K left over for Copy II Plus and Bag of Tricks and anything else I might have wanted to add.

However you must trade something off for all this extra memory. Apart from the cost of the card, if you wish to use the card for business use, you will probably require the optional RAMCHARGER battery back up pack, so you will not lose data from the rather vulnerable transient memory. This pack will allow you to plug into the mains, and run the card even though your Apple is switched off, it also provides some 5 hours of backup if the mains supply fails.

The simplest way to use the card is to plug it in and away you go. Prodos will recognise it on boot, as will Pascal 1.3, and you will have an unformatted disc at your disposal. Unformatted in this case simply means that you cannot boot from it. If you format it from Prodos or Pascal you can even boot from the card as though it were a disc. In fact if you have the battery back up option, and place the card in slot 7, on an

enhanced //e you will get whatever is in the card running when you switch your machine on.

This is only the start. There is a lot more available from the card itself, the comprehensive manual and the double sided utility disc provided. For instance from DOS 3.3, all you need to do is issue an IN#S where 'S' is the card slot, and you have two new fast drives in that slot, each with 1536 sectors available and with Catalogs that can take some 217 files each. COPYA took 1.5 seconds to load and run from the card. Prodos, Pascal and DOS 3.3 can all be made into bootable versions on the card. No special programs or versions of the operating system are needed. Note that only the //e will auto-boot the card, you will need to do a PR#S to choose the program or partition you want to boot from on any other machine.

That is not all. The memory space can be sub-divided or partitioned off in such a way that you can have Prodos, Pascal and DOS 3.3 files all resident at once. However only one partition can be active at any one time, and to change over, you need to access a program in ROM on the card itself. Up to 9 partitions can be created, and these could be changed or selected from an EXEC file if you were liked.

The double sided disc provided, has a Prodos and a DOS 3.3 side. The DOS 3.3 side has FID and a custom Exec file called COPYM. You can prepare COPYM to actually run FID for the files you want to copy. It really is there only to make life easier in getting what you want on to the card. On the other side of the disc are routines for patching Appleworks version 1.3 or later to give vastly increased facilities. On an Apple II+ it will allow you not only to run Appleworks, but give you lower case input and display with the Videx 80 column card. Also it will give alternate key commands and supports any Prodos compatible clock cards. In an Apple //e, it allows the whole of the Appleworks disc to be loaded into memory, giving an improved speed of operation. You can have 5100 lines in the word processor, 5100 records in the data base. It will support multiple disc file saves to allow large desktops to be spread over more than one floppy. And if you have a clock card, you can time and date stamp your files.

I have been talking about the 1 megabyte version of RAMFACTOR. In fact you can buy RAMFACTOR as a 256K starter, and simply add the chips as you need. It is well made, and is of the longer tapered type of card, which it needs to be with some thirty-two 256K chips when full loaded. Briefly mentioned in the manual is a 50 pin expansion plug on the card which allows the linking of further cards. I make that a possible 6 megabytes can be added leaving one slot for your 5.25 inch drive to get it all loaded up. How about that, a 6 megabyte desktop for Appleworks! A further small plug at the front of the card, allows the optional battery back-up to be added.

RAMFACTOR is available from BIDMUTHIN TECHNOLOGIES see their latest advertisement in this issue for current prices, but as a guide, the starter 256K card is about £240, and the 1 megabyte about £370. ■

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# Apple /// Pages

## APPLE 3 DRIVERS

By David Ottalini  
Washington Apple Pi

Thanks to our good friends at ATUNC, the Apple Three Users of Northern California, a complete list of the sizes of various Apple /// Drivers is being developed. This information can be of critical importance, since drivers take up plenty of memory.

The key to using drivers in a particular program is to simply never install any more than you absolutely need. If you don't need an .RS232 driver, for example, use the System Utilities Program and its System Configuration Program to delete it.

The SCP will tell you to begin with what is in your driver file, allow you to edit them, etc. If your driver file gets too big, you may have to make a separate boot diskette containing SOS.Kernal, SOS.Interp and SOS.Driver, with the rest of the program on a second diskette. Again, your System Utilities Program will let you do that, or you can also use the Filer in Pascal.

The following Driver file sizes are the latest compiled by ATUNC. If you have any additions, etc. let me know and we'll add them to our list and pass them along to the folks on the West Coast.

DRIVER NAME	FOR/FROM	SIZE
.CONSOLE	Apple	7K
.CONSOLE	Powerkeys	10K
.CONSOLE	Powerkeys+CP	12K
.RAM	Titan ///+//e	13K
.PPRINT	D.A.Data Systems	2-30K
.SPOOLER	Quark	6K
.SPOOLSTATUS	Quark	6K
.GRAFIX	Apple	5K
.PRINTER	Apple-Serial	2K
.PRINTER	Apple-Parallel	2K
.PRINTER	Grappler-Par	4K
.RS232	Apple	3K
.FMTDX	Apple-Formatter	1K
.CATALYST	Quark	10K
.QUARKCOM + UNUSED1-6	Quark	1K
.PROFILE	Apple Hard disk	1K
.ONTIME	On Three	2K
.ATTACH		1K
.AUDIO	Apple	1K
.PKASO/U	Complete	5K
.PKASO/U	Mini	1K
.TMPDX.CODE	Microsci 143	5K
.TMPFMT.CODE	Microsci Formatter	5K



## APPLE /// in the U.S.A.

By our World Reporter Irene Flaxman

Whilst in the USA for the MacWorld expo, we met a friendly Apple dealer who was very helpful. Amongst the information he gave us, there was a newsletter entitled 'SUN TIMES - Shedding a Little Light on the Apple ///'. This contained articles on Apple Writer/Speller, adding a new driver to your configuration, and CP/M on the Apple ///.

The newsletter is produced by SUN SYSTEMS REMARKETING, who specialise in supplying Apple /// manuals, software and hardware, including Apple /// machines - in fact, anything you require for your Apple ///. The address: Sun Systems Remarketing P.O.Box 405 Logan UT 84321 U.S.A Telephone: 800-821-3221 Bulletin Board: 801-753-2899 (password: DEMO)

You will not find anything but Apple /// in here, which is strong in the States, even if only a few machines were sold in the UK. This is the clearing house for Apple /// in the States - they apparently bought up all the stock, and took on the responsibility for supporting the system. The price list includes new and reconditioned machines, and a comprehensive range of software. The prices seem to be about 50% below suggested retail price in the States, they accept VISA and Mastercard payments. Telephone orders with credit cards are welcome. Telephone numbers quoted are the 'toll free' variety, which we can't use. Still, I've passed them on - you never know when you'll be over there!

One of the advertisers in the newsletter was for a magazine called 'The /// Magazine'. This is produced monthly, and is advertised as an 'independent journal for: /// information, technical data, software reviews, business tips, fun'. All subscriptions start from 1st January, you get all the back issues when you join. Overseas subscription rate is \$60.00 for 12 issues. The address is: The /// Magazine 3201 Murchison Way Carmichael CA 95608 Telephone: 916-485-6525 (All quoted phone numbers need the USA code first.)

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## SHOW 87

After the huge success of SHOW 86 it was decided to make the show an annual event and to use it as a meeting point for all user groups and their members. Most members rarely come into contact with other members, even though they might know them quite well by name, and the show provides the opportunity for placing faces to the names we are familiar with. So come along and meet other users!

SHOW 87 is going to be bigger and better than the previous show and we have many different attractions arranged for the day. To start with we will have the full support of Apple UK and they will be helping us wherever possible. While at Appleworld I invited Steve Wozniak to attend our show and we are hoping that he will return in March for this event, to give all users a chance to see, hear and speak.

At the last show hundreds of pounds of bargains were sold as soon as the show opened in the morning. There will be thousands of pounds worth of bargains this year and we will make sure that they are spread out over the day, giving everyone a chance to purchase. The UK's first Apple Auction should prove to be an interesting feature, the auction will include software and hardware to be sold for cash to the highest bidder. The bring and buy sale is for users to part with equipment and software that they no longer have a use for. An area for selling will be provided and members will be responsible for the security of their own sale goods.

Lectures will take place in the afternoon and a number of very interesting people have offered their services. A special room has been organised for our newly formed A2000 Developers Group and a think tank session will take place there during the afternoon, all interested parties are welcome. A special games area will be reserved in the cellars, just the place to play a multi-user adventure game.

The whole family is invited! We want this day to be as much a family day as a users day, as the rest of the family are often left out at computer meets. For extra entertainment the Amusement Park will be open in the afternoon. All the rides will be FREE and they include the fearsome COBRA rollercoaster ( the only one in the UK ), the Pirate Ship, the Swings, the UFO and the Dodgems.

Food and refreshments can be purchased at the Burger Bar or at the Farmhouse Kitchen and they will be open all day, as will the Bar. Caravans are welcome to spend the night on the car park. Special rates have been arranged at a nearby Hotel for those spending Friday or Saturday night.

Tickets are £3.00 each, however if you bring the family there is a special price of just £6.00 (Two adults and children). It is going to be a fantastic day, so don't miss this one for anything. As before tickets are limited so don't delay, get yours now from Apple 2000.....and SEE YOU THERE !!!!

## PINPOINT

### ACCESSORIES, COMMUNICATIONS AND MUCH MORE.....

Stand-alone or integral with AppleWorks.

PinPoint provides desk-top accessories and communications which become an integral part of AppleWorks. A single key press gives you access to:

Communications  
Calculator  
Appointment diary/calendar  
Notepad  
Typewriter  
QuickLabel  
Graphics/Text Merging

### PLUS: SPELLING CHECKER

PINPOINT provides communications with electronic mail/telex services such as One-to-One, Telecom Gold and EasyLink from within AppleWorks and is as easy to use as AppleWorks itself. It will directly transmit an AppleWorks Word Processor file. There is no text-file creation necessary, simply use the arrow keys to point to the file to transmit. Messages received are automatically saved as AppleWorks WP files. And all without quitting AppleWorks.

### PINPOINT POP-UP SPELLING CHECKER

You can now Spell check within AppleWorks without leaving your document. There is no need to save, print or create a text file. One keypress selects the Spelling checker. You can check an entire document, just a paragraph or just a word, with a single keypress. You can even check the spelling of a word in a Spreadsheet cell or a DataBase field.

When spelling is faulty the pop-up speller will suggest up to 10 alternatives for automatic correction or you can easily add the word to the dictionary. Or you can edit the word yourself.

The Spelling checker is an optional add-on to PinPoint and is dedicated for AppleWorks.

Both PinPoint and the Spelling checker are particularly suited for use with extended memory peripherals such as RamWorks, Z-RAM and RamFactor....

### MEMORY MANAGEMENT with PinPoint RAM Enhancement Kit:

This is a utility program which gives much more flexibility and ease of use when using Ramdisks.

The RamFactor card can be automatically partitioned via its own on-board firmware. RamWorks and Z-RAM are usually used as a total memory area for expanded AppleWorks (or other single program such as Supercalc 3a) or as a single RamDisk.

Using the PinPoint RAM Enhancement Kit enables RamWorks and Z-RAM to be easily partitioned into two areas: typically one area for expanded AppleWorks and the second area as a Ram-Disk containing often-used files. The RAM Enhancement Kit enables a startup disk to be created which will automatically load the required files into RAM on boot-up. A typical configuration would be for a 1 Meg RamWorks to have 700K available to Expanded AppleWorks and 320K designated as a Ram Disk. The Ram Disk has been set to auto-load the PinPoint accessories (including the spelling checker and its 50,000 word dictionary) plus two standard letter formats, and two spreadsheet templates. On boot-up, all these are automatically loaded into RAM, saving later disk access and giving fast loading into the AppleWorks desktop directly from the Ram disk. (AppleWorks recognises the Ramdisk directly). PINPOINT requires a IIc or Enhanced IIe with at least 128K of RAM.

Prices: (excluding VAT)	
PinPoint	£69.00
PinPoint Pop-up Spelling Checker	£69.00
PinPoint Ram Enhancement Kit	£29.00
(included free with PinPoint to Z-RAM RamWorks owners)	
IIe Enhancement Kit (4 chips)	£59.00

## MULTISCRIBE

MultiScribe gives you MacWrite on the Apple IIe or IIc.

MultiScribe uses the double hi-res screen to provide multiple fonts, and sizes, proportional spacing and shadow outline printing - just like MacWrite!

Plain Text

**Bold**

*Italics*

Underline

Shadow

Outline

Subscript

With MultiScribe you don't have to use a mouse. All functions and pull-down menus are easily accessed via the keyboard. Plus, as well as 10 fonts provided, there's even a font editor so you can create your own. All this on a full feature word processor.

Multi-Scribe works with a IIc or 128K IIe and most dot matrix printers and interface cards. You can even use Multi-Scribe to customise files created on other word processors such as AppleWorks or AppleWriter - in fact any word processor that can save text as a text file. Give your old files new life with the attractive, attention-getting fonts and print-styling available only with MultiScribe. (MultiScribe can also save text as text files for transfer to other programs).

For all its sophisticated features, MultiScribe is remarkably easy to learn and use. There are no complicated control codes to learn. Macintosh-style pull-down menus provide you with all the word processor commands you'll ever need - without leaving your document. And MultiScribe features advanced visually-oriented text editing commands, like cut & paste and ruler-based text formatting.

### IF YOU'RE AFRAID OF MICE, DON'T WORRY

With MultiScribe you have the option of using a standard keyboard or a mouse. You can use your mouse to pick and click commands from the pull-down menus, or use the keyboard to simulate mouse action. And for advanced users, MultiScribe offers keyboard equivalents for most commands, allowing you to by-pass the pull-down menus.

With MultiScribe you can change type styles easily, on the screen and on your printouts. With a few simple keystrokes or mouse clicks, you can change that humdrum print into fancy fonts - like Old English, business quality print, foreign language characters or maths and engineering symbols. Ten fonts are included but if you don't like any of them, then you can create your own (or edit an existing font), with MultiScribe's FontEditor. For education the FontEditor can be used to create maths, physics, chemistry and biology fonts while for business use, the FontEditor can be used to create logos and letter heads.

MultiScribe can even be "Ram-Driven" with RamWorks, Z-RAM or RamFactor, and accelerated with TransWarp.

And all this for just £59.00.

No wonder Nibble magazine gave MultiScribe 5 apples - its highest rating.

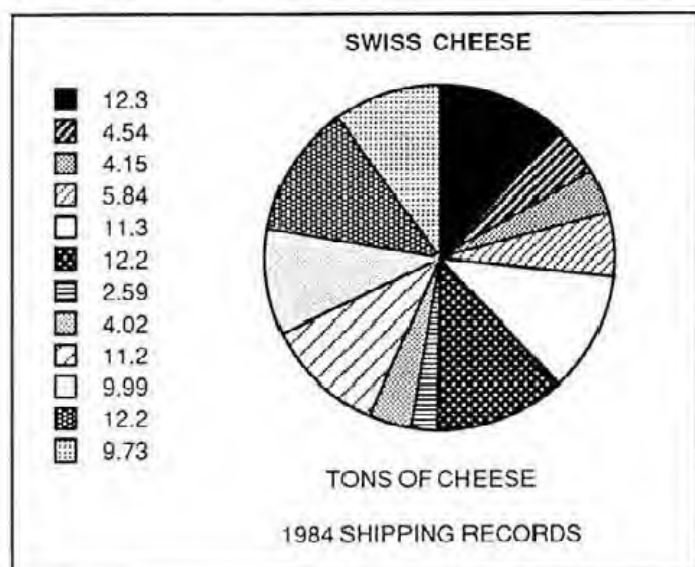
Price: (excluding VAT)  
MultiScribe

£59.00

**BIDMUTHIN TECHNOLOGIES**

# GRAPHWORKS

GraphWorks is the graphing program for AppleWorks.



GraphWorks has been developed to offer business graphics capabilities for AppleWorks Users. GraphWorks is a stand-alone program which directly accesses AppleWorks spreadsheet files and plots them as four graph types; bar, stacked-bar, line and pie charts.

Price: (excluding VAT)

GraphWorks £79.00

## ProFILER 2.1

ProDos DataBase for Apple II computers

ProFiler 2.1 is a data manager/report generator which is intermediate in terms of power and ease of use between simple file systems such as Quickfile/ApplesWorks and complex, truly powerful databases such as dBaseIII and Omnis.

The structure of ProFiler is a flat file system with the ability to merge two files. It also provides a mail-merge facility with AppleWriter II, and will accept database files from ApplesWorks.

ProFiler 2.1 has been designed for ease of use, is menu driven with help screens available at key points. It is programmed on a single floppy disk with hard disk transfer capabilities for increased storage and speed.

Key features are:

Maximum records per file:	64,000 (Subject to available space on your disk) (floppy or hard disk)).
Maximum pages per record:	8 (16 in 40 column mode)
Maximum fields per record:	250
Index fields per record:	3
Search:	Maximum of 10 search criteria per record. (Browse and/or report)
Report:	Free-Form or columnar "Calculated fields on columnar report plus averages, counts and totals."
Mail-Merge:	With AppleWriter II Version 2.0 (ProDos). (Use the Convert utility for Dos 3.3 version)
Import Data:	Accepts ApplesWorks' DataBase files directly. Will also accept text file input. (And can output as text file)

Price: (excluding VAT)  
ProFiler 2.1

£99.00

# RAMFACTOR FOR THE II+ / IIe / IIGs

## RAMFACTOR FOR APPLEWORKS ON THE II+

While RamWorks is the clear winner for the auxiliary slot of a IIe, RamFactor sets the standard for IIe main slots and the II+.

Like RamWorks and Z-RAM, RamFactor follows the Apple software standard. RamFactor also follows the Apple II Memory Expansion standard for Ram cards.

This permits the organisation of the memory into multiple work areas containing different programs and operating systems. It also permits limited expansion of ApplesWorks 1.3 or later.

With RamFactor, you'll be able to instantly add another 256K, 512K or 1 Meg onto the main board of your IIe or II+.

And as it's socketed you can upgrade your Ram Factor at any time.

Virtually all modern software is already automatically compatible with RamFactor: software such as ApplesWorks, PinPoint, SuperCalc 3a, ProFiler, Catalyst 3.0 and more.

## PROGRAM FLIPPING

RamFactor can be organised into a maximum of nine partitions. Each partition functions as a separate RamDisk which may be configured for either ProDos, Dos 3.3 or Pascal 1.3. This enables you to switch between programs and operating systems at electronic speeds.

## APPLEWORKS POWER

RamFactor now includes software which enables ApplesWorks to run on the II+.

So, with RamFactor you don't need any further software to run ApplesWorks on your II+. And RamFactor expands ApplesWorks as well:

RamFactor gives ApplesWorks a larger desktop, increases ApplesWorks' internal memory limits so that the Word Processor can have 5,300 lines, and the database 5,300 records. Plus it also automatically loads ApplesWorks into RAM and so accelerates ApplesWorks by eliminating program disk access. It will also auto-segment large files across 2 or more floppy disks. It even provides the time and date on the screen with virtually any ProDos compatible clock.

Unlike RamWorks, however, the ApplesWorks must be version 1.3 or greater. And you still require an 80 column card (for II+ we recommend ViewMaster). You also require a 16K language card in Slot 0 (or the Transwarp accelerator in slot 0).

Prices: (excluding VAT)

256K RamFactor	£239.00
512K RamFactor	£289.00
1 Meg RamFactor	£369.00

## BIDMUTHIN TECHNOLOGIES

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# BIDMUTHIN TECHNOLOGIES

# FORMAT-80 SCIENTIFIC

## A Review

By Harry Gardiner

One of the challenges almost all word-processors fail is producing mathematical and scientific formulae and equations. Elite Software have issued a major revision of their well-known FORMAT-80 word-processing package that gets over many of the problems.

Called FORMAT-80 SCIENTIFIC, it costs £179, or a mere £60 currently for existing Format-80 Enhanced owners to upgrade. It adds Greek letters and maths symbols to the usual character set. I found it well capable of creating complex equations on-screen and in print.

### What Do You Get ?

- a Format-80 Scientific Disk, DOS 3.3 only
- a normal Format-80 Enhanced Disk, with DOS 3.3, Prodos, and Spreadsheet versions
- a normal Format-80 manual (copyright 1982) with supplements for the Prodos & spreadsheet (7 pages) & Scientific (17 pages) versions.

The Scientific program loads wholly into the Apple II memory, so it can run on a single disk-drive system, but the 64K RAM constraint means a few of Format-80's normal features are missing.

### What Kit Do You Need ?

- 1 - An Apple IIc, or IIe with extended 80 column card to give 128k,
- 2 - At least one disk drive
- 3 - One of the following printers; Apple Imagewriter I or II, Epson FX or MX series, or an NEC Spinwriter 'thimble-wheel' (e.g. the ELF)
- 4 - One of the following printer interface cards for the Apple IIe; Grappler+ for the Epsoms, or the Super serial card for the rest.
- 5 - The NEC Spinwriter will need the Tech Maths/Times Roman print thimble.

NB You can type & save scientific pages with just 1 & 2 above.

Elite's adverts appear to be produced with the Imagewriter and NEC printers. I could only use Epson printers; this was a pity as the program looks as though it works better with Imagewriters. My thanks go to Midapple colleagues Tony Carr and William Watson who alternately loaned me their Grappler+ printer cards.

### Starting up

Prior to loading the program the printer needs setting up. Epsoms in the FX series need the print buffer switching off (with a DIP switch) so its' memory can store the downloaded character set Format-80 Scientific has ready for them. NEC

printers need Diablo emulation switching in. The manual's Scientific supplement gives good guidance for printer set up.

On booting, the program automatically sets up an Imagewriter - for other printers booting has to be interrupted immediately with the Escape key to get a printer set-up choice menu. The program then takes a bit longer than normal to load, before producing the normal Format-80 main menu. Elite Software might like to consider a faster DOS, but you could customise one - DiversidDOS might cut the 60 seconds to 20.

Experienced Format-80 users will find few changes, there is no on-screen underline, experienced Format 80 Enhanced users will notice the lack of both the spreadsheet version and Prodos. The screen display is in high-res graphics, so is slower to scroll vertically. It shimmered and was hard to read on one Apple IIc I used. Commands generally operate a bit slower, and I had to slow down keyboard input a bit. Otherwise all the many virtues and few vices of Format-80 are preserved intact.

Beginners will need at least to work through the Quick-Guide in the main manual before they use the Scientific Maths facilities. For those readers not familiar with Format-80, it can be summarised as a friendly page-based word processor suited to shorter documents, with versatile printer control commands, and easily altered installations.

Moving text around in longer documents is a bit tricky, one or two of the commands and command sequences are hard to remember, and it is too easy to wipe text off your disk by mistakenly initialising it. (Newer versions are a bit better, but the 'initialise-your-blank-disk key' is still right next to the 'put-my-last-page-back-on-screen-key'...)

All in all, Format-80 is a smashing beginner's word-processor that is versatile enough to cope with complex documents and printer capabilities, and for you to grow very expert with.

### Inputting Formulae and Scientific Symbols

The big difference emerges when you start entering formulae and symbols and the slightly slower high-res screen comes into its own as Greek letters, and all manner of brackets pop up just where you want them. (Well, almost !) But you DO have to re-learn the keyboard; twice too !

The first time is after pressing the 'open apple' and the left arrow key which together switch the keyboard into the Greek character set: unfortunately it does not switch the key top symbols as well, so I really needed the manual's keyboard diagrams to find which key does what. Open apple and the right arrow key switches off the Greek mode.

To access the second extra 'large symbols' character set the closed apple key is held down whilst the appropriate key is pressed.

All this key-searching reminded me of learning my way round the Spectrum keyboard, but three keyboards packed into one still does not enable Elite Software to provide ALL the mathematical signs and characters that scientists, statisticians, and mathematicians will want, so peruse FIGS 2 and 3 to see what characters are available, and let Elite Software know about the one's that are not, that you really need. I certainly appreciate the mere 26 characters in our alphabet more now; what a lot we manage to say with so few letters !

I tested print-out of the character sets on colleagues familiar with the ABC of equations, and found the shapes of some are wanting, as printed by the Epson FX 80. Some characters were not curly enough, others were not similar enough to the shape in common usage. Other characters were missing. The dot images of the screen and the printer cannot match the quality of the shapes typesetters use in formulae, nor can a daisy-wheel carry the quantity of special characters needed; the limitations of Apple II level technology are very evident in these problems.

Figure 1 
$$\left[ \frac{M_a^3 + N_b^2}{M_i^3 + N_j^2} \right] = \sum_{i,j=0}^{i,j=0} \frac{3x + N^2}{5MN} + \int \frac{[3x + y]}{\sqrt{3M_a - N_b}} \cdot dy$$

Complete solutions lie in the Mac, Laserwriter, and Postscript direction. Nevertheless, though Format-80 Scientific will not satisfy all mathematicians, it does meet the central needs of most Scientific users. I solved a problem in an existing Format 80 document on energy use in buildings; all the equations missing from it were soon put in with Format 80 Scientific's help, also showing that old Format 80 pages can be used and modified by the Scientific version.

Upper Case	!	@	£	\$	%	^	&	*	(	)	-	+
	!	@	£	\$	%	^	&	*	(	)	-	+
	Q	W	E	R	T	Y	U	I	O	P	{	}
	Q	W	E	R	T	Y	U	I	O	P	{	}
Lower Case	A	S	D	F	G	H	J	K	L	:	"	~
	A	S	D	F	G	H	J	K	L	:	"	~
	a	s	d	f	g	h	j	k	l	:	"	~
	a	s	d	f	g	h	j	k	l	:	"	~

Open Character Set  
Figure 2

Returning to the entering of formulae, the positioning and altering of large symbols can be complicated. They occupy more than character space, vertically and sometimes horizontally, so ONE keystroke enters the character - but deleting it can take a lot of cursor movement, and blanking out with the space bar.

After entering tall brackets (and this program has more types of bracket than a D I Y store) the cursor jumps down to the bracket's vertical mid-point. This all calls for good planning and learning what will and should go where BEFORE typing in the formula: combined with learning which character is where on which 'keyboard' FIGURE 1 took me 40 minutes to get right. With lots of practice this could be cut to 8 minutes.

Generally, I found the manual inadequate here. There was no advice or information on the height and width of characters, vertical cursor movement; so those who like text with graphics adventures will have a fine time experimenting. The rest of us will have to cuss our way up the learning curve.

Finally, all users should beware of using the DELETE key; this has a charming way in Format 80 of totally destroying the layout of your columns of figures, or tables etc.. The Scientific version is no exception; compare FIGURE 1 with FIGURE 6 to see the 'before and after' of the havoc you can wreck with just one press of this innocent looking key.

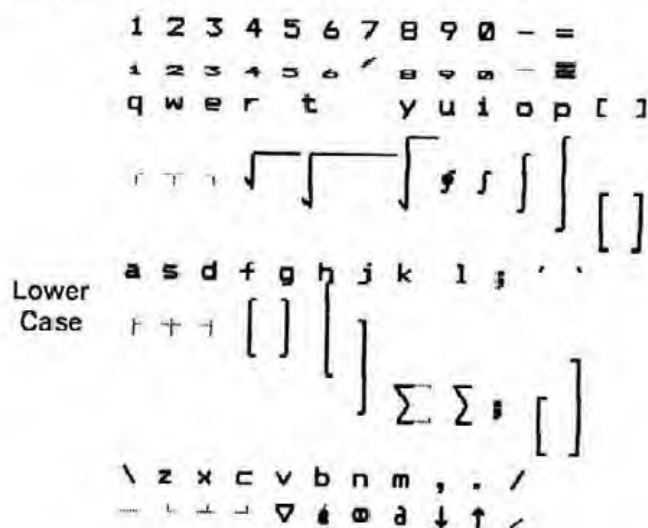
!	@	£	\$	%	^	&	*	(	)	-	+
1	2	3	4	5	6	7	8	9	0	=	
Q	W	E	R	T	Y	U	I	O	P	{	}
Q	W	E	R	T	Y	U	I	O	P	{	}
A	S	D	F	G	H	J	K	L	:	"	~
A	S	D	F	G	H	J	K	L	:	"	~
a	s	d	f	g	h	j	k	l	:	"	~
a	s	d	f	g	h	j	k	l	:	"	~

Closed Character Set  
Figure 3 (a)

## Printing Scientific Formulae and Documents

My comments here are based on experience with Epson printers only. To be fair to Elite software an Imagewriter is probably the optimal printer for Format-80 Scientific, I just could not get the right leads, card, and Apple IIe working together at the same time. Even when your printer is set up, getting it to print exactly the print and styles you want can be a wearisome process; Format-80 drives its printer well.

Two print modes are available for Epsoms - using downloaded character sets, or using graphics mode to produce the characters. The former drives FX printers, the latter MX series printers. Both modes ran quite happily on several FX 80 - Apple IIe combinations I tried. An Epson LQ1500 failed to work. I think the Pre-document printer control characters Elite software have do not set up the LQ 1500 correctly, a pity as this printer can produce superbly defined characters.



Closed & Character Set  
Figure 3 (b)

The Epson FX 80 printed characters sets are in FIGURES 2 and 3, and are OK except for the subscript 7 (see row three FIG 3) which has caught a bug and stuck its' head in the clouds. The second problem is that Format 80 really prints the characters with one pass of the printing head as in FIG 1, which was printed with a new Epson ribbon. This has rather gritty characters made of single lines of dots, which do not look or copy very well; purchasers of a scientific word processor would, in my view want a better output than this, if not they could more cheaply (and quickly ?) draw the awkward symbols in by hand.

$$\left[ \begin{array}{c} M_{\alpha}^3 + N_{\beta}^2 \\ M_i^3 + N_j^2 \end{array} \right] = \sum_{i,j=0}^{1,j=0} \frac{3x + N^2}{5MN} + \int_0^1 \frac{[3x + y]}{\sqrt{3M_{\alpha} - N_{\beta}}} \cdot dy$$

Equation as in FIG 1. Emphasised and double struck. ( note graphics characters still printed once only).  
Printed using downloaded characters on an Epson FX-80.

Figure 4

I experimented, and found that using graphics mode, as if for MX printers, nothing could be done, but using the downloaded character set mode then emphasising and double-striking gave a NLQ look to the formulae (see FIGS 2 & 3).

Because the special characters are downloaded and actually in the FX 80's memory, all the other printer control codes can be used. However, Epson did not equip their FX 80 with enough downloadable character spaces for the set of symbols Elite have chosen. So Elite had to print the rest of the symbols using the Epsoms graphics mode. The reason for this thrilling digression is to point out the 'graphics' characters in FIG 3; they still only print in a single pass, are thin and not NLQ at all. I cannot find a downloadable character (i.e. that will come

up pseudo-NLQ) for a continuous horizontal line vertically centered. Hence we get the thin line in the middle of the equation in FIG 4.

Finally, there is a price to be paid for the characters that do come up pseudo-NLQ - slow printing! FIGURE 1 took 33 seconds to print in one pass (the 'graphics' characters are slow). Reprinting emphasised took 40 seconds, double-struck 80 seconds, both together ( as FIG 4 ) 90 seconds. Emphasising produces a second 'strike' of each character displaced slightly sideways, and double strike displaces the second strike downwards. Combined together they produce four strikes, the dots over-lapping and merging into each other in true NLQ fashion.

## Matching the Screen and Printed Characters

If you hunt you can find a variety of downloadable character sets for printers such as the Epson FX 80, but their designers do not go as far as Elite have in this program, by designing on-screen equivalents for all the special characters being dumped into the printer. 'What you see is what you get', with Format 80 Scientific. However, to give the tall characters continuous verticals crossing the white space between lines of print, Format 80 Scientific prints 12 lines to the inch instead of 6.

There is a printer command to make the printer switch to these 'half-height' lines, either for the whole page, or just for the lines containing the formula. FIGURE 6 shows what happens if you leave this command out. However, this means the screen length of a page could be 80 lines, but the printed length could come out the equivalent of 40 lines. Page lengths would vary with the equation content. To get even page lengths Elite have inserted double line feed commands to insert vertical 'white space', but you will need a computer program to work out the number needed, dependant on the number of equations.....

## CONCLUSIONS

$$\left[ \begin{array}{c} M_{\alpha}^3 + N_{\beta}^2 \\ M_i^3 + N_j^2 \end{array} \right] = \sum_{i,j=0}^{1,j=0} \frac{3x + N^2}{5MN} + \int_0^1 \frac{[3x + y]}{\sqrt{3M_{\alpha} - N_{\beta}}} \cdot dy$$

- For those owning Format 80 Enhanced, and the appropriate combinations of card and printer, who need a scientific word processor, the upgrade to the Scientific version is good value at its special for now price of £60.

- For those starting from scratch, the combined software-hardware price is pretty high, but the word processor is versatile and user-friendly, so if potential users can find the symbols they need, and find the character shapes acceptable the cost may be worth it, though I would expect the MacIntosh to offer a superior capability.

- There are faults in the Epson version; I would have thought the potential Epson market was big enough to get it right.

- The Scientific Supplement to the manual is good for setting

up, but poor as a tutorial. Maths users will have to teach themselves a lot.

• The software does not facilitate designing your own symbols. Had it done so specialists might get more of the special characters they wanted. This would be quite a big addition to the program, but might allow importing other non-maths downloadable character sets, to give ordinary printing more variety.

the world of maths and science by storm.

• A version on the new IIGS could overcome many of the limitations of the Apple II. Presumably there would be room for a spelling-checker, indexer, footnote-keeper, and continuous document format too!

• A version in ROM on a specialist printer card could take the old Apple II technology further, solve the printer interface problem too and simplify the provision of extra memory, and

$$\left[ \begin{array}{c} 3 \\ M + N \\ \alpha \quad \beta \\ \hline 3 \\ M + N \\ i \quad j \end{array} \right] = \begin{array}{c} i, j=0 \\ \sqrt{\quad} \\ \quad \\ i, j=0 \end{array} \frac{3x + N^2}{5MN} + \left[ \begin{array}{c} 0 \\ \sqrt{\quad} \\ \frac{[3x + y]}{\alpha \quad \beta} \\ \sqrt{3M - N} \\ \tau \end{array} \right] \cdot \delta y$$

Printing with large symbols requires the insertion of a half-line printing command; without it the formula prints like the above. However, using half line mode with normal text in between equations causes compressed text.

Figure 5

- Alternatively, Elite could offer bespoke character sets, which could also be stored and called from disk.
- The program is robust, though I had more problems with it than with ordinary Format 80.
- The matching on-screen and printed characters, gives a bit of

character sets.

• For those with existing Iie or Iic Apples needing a scientific processor, this one can cope with a lot, and is particularly good value to existing Format 80 Enhanced users, especially if they already have either Imagewriter.

$$\left[ \begin{array}{c} x \\ i, j=0 \\ \sqrt{\quad} \\ \quad \\ i, j=0 \end{array} \right] \frac{3x + N^2}{5MN} + \left[ \begin{array}{c} 0 \\ \sqrt{\quad} \\ \frac{[3x + y]}{\alpha \quad \beta} \\ \sqrt{3M - N} \\ \tau \end{array} \right] \cdot \delta y$$

BEWARE of the DELETE KEY! As with tables in normal Format 80, the DELETE key can wreck havoc with the layout of formula. To create the mess above, I put the cursor after the X at the start of the formula from Fig 4 and pressed DELETE once.....

Figure 6

Mac friendliness to the Apple II. As an example of ingenious programming Elite should take a bow for having crammed so much new program in without losing much from the original version.

• Overall, an impressive extension to Apple II word-processing capability, which needs a bit more development and printers with more downloadable character set space, before it will take

The review copy of Format 80 Scientific was supplied by:

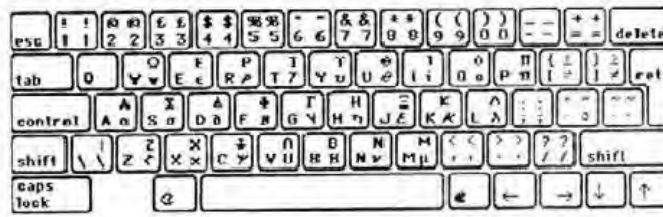
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Telephone 0323 845 898



## KEYBOARD LAYOUTS



The Closed Apple keyboard character set



The Alternative keyboard character set.

# Your Letters to the Editor

Dear Sir,

There seems to be some confusion about the price of MICOL BASIC. In the review Vol(1/1) the price was quoted as \$49.95. In all the U.S. ads I have (eg. in CALL APPLE) this price is also quoted. In the offer you quote \$89.95. At either of these prices £50 does not look like a good deal. I have great experience over a number of years of importing software and books from U.S. advertisers. For an order for MICOL BASIC I would expect to pay up to \$10 for Airmail delivery door to door making the total \$59.95 (No tax or duty has ever been requested for books or software). At \$1.5's to £1.00 this would be £40. Currently a little more say £43 would cover the cost because of the dollar handling. Your £50 + £2 + VAT is greater than £60 does not look like such a good deal to me.

As an example I purchased about six months ago a copy of Z-BASIC for Apple IIe and CPM. Total cost about \$100 (listed + postage). (Actual charge to my VISA account was £71.79. Had I waited a while longer "CALL APPLE" would have supplied it for \$10 less! I look forward to visiting AppleWorld but I will import my own MICOL BASIC should Z-BASIC let me down. To date the ability to speed up Double Hi-res graphics plotting and run double precision floating point is excellent. For most other generation, Z-BASIC is no faster than Microsoft Compiled Applesoft which I have previously totally relied on for my work.

I do appreciate the idea of "Offers" especially if they can be made on some of the popular but expensive "add on boards". Perhaps someone could clarify the price of Apple2000 MICOL! Yours sincerely  
Ian D. Entwistle

[Reply].....

Thanks for the letter on .... MICOL Basic..... in fact the latest version is \$89.95 in the USA and by being a member you can get it for £50 which is a lot cheaper. Latest CALL APPLE states \$89.95 for this excellent product!

You should beware when buying direct from the States ... see letter BUYER BEWARE

Dear Jim,

Just a short note to say three things -  
1) I like the format of Apple2000 latest issue- standard layout looks good.

2) Some of the reviews, like mine on DMP Utilities and Tom Wright's on graphics need the print-out to show what the programmes do. I guess you have a general problems of too much copy for each issue, so you cut the accompanying graphics that go with the text. I think this is a mistake because readers do not see examples of what the output looks like, and reviewers waste a lot of time producing specially printed output which is thrown away.

3) As a footnote to my review of Format-80 Scientific, I have just managed to print formulae with an Imagewriter 1, and the results ARE better than with Epson FX80 printers. The superscript 7 is OK and all the characters and symbols can be emboldened. Anyone already having either Imagewriter would get good results from this software.

Best wishes and don't wear yourself out.....!

Harry Gardiner

[Reply]

First thanks for the article, on Format 80.

I have put your printouts in - although I have had to edit some of it.

There are several reasons that dumps from dmp's are not placed in articles, the first is that the Laserwritten text tends to make it very difficult for the printer to get an even tone over the page - the quality goes down and we are trying very hard to improve it.

The second is the time taken to put these pieces in. Your Format 80 article took over four hours to format and print - and that did not include the time to check the text! I am glad you enjoy the mag and you can rest assured that we are improving it all the time.

Ed

Dear Editor,

Congratulations on the new format and contents of the club magazine, with it's cover in 'glorious technicolour'! The October edition has just arrived, and at least one article was particularly good, Paul Ross of Washington Apple Pi on setting up a custom printer in AppleWorks to give near letter quality printing on an Epson DMP. An hour's effort got it all into my copy of AppleWorks, giving me much improved document output much closer to that elusive 'letter quality' and demonstrating talents hiding inside my Epson.

But - oh, dear - you do have to watch the detail. There was a carat omitted in the first line under the sub-heading "9 characters per inch". It should read  
`Enter "ESC ! CTRL-H ESC 4" not "ESC! -H ESC 4"`  
and what's more, under the sub-heading "8 lines per inch" it is not clear if ESC (zero) or ESC (letter o) is meant; that slash makes a lot of difference.

I haven't had time to read the rest yet, but Paul's article caught my eye as I have been looking for something like this for a long time. So, YES let's have more of the same, and I look forward to the spreadsheet tips too.

Congratulations on a much improved and exciting magazine.

Yours,

Mike Worth

[Reply] .... More of the same it is Mike!

Dear Editor,

I am writing about AppleWorks problems. In the October issue of Apple2000 you printed an article on Letter Quality Printing and the Epson FX80. I entered the appropriate codes, but did not get the expected results. I have the Dark Star chip on the printer card in the Apple IIe computer. The print-out I obtained is enclosed.

Another minor irritant is the printing of CONTROL I 132N on the first label when printing out a series or on a spreadsheet report. I have tried the CONTROL I ON without success.

Also when printing out labels, can they be printed continuously, as maximum I can now do is 25.4 inches?

I hope you will be able to help.

Yours sincerely

Graham Montgomerie

[Reply]

Hopefully Mike Worth's letter helps

## BUYER BEWARE

Dear Sir,

I hope I may be permitted to air a grievance over my dealings with Blyth Software.

A few months ago I ordered Omnis 2 via the Apple User Group in the U.S.A. By the time it arrived I was pleased to read in your pages that it was actually the product of an English Company. For everyone's convenience therefore I forwarded my registration card and (as urged in "Hardcore") my boot disc for adaption to 3.5 Unidisc.

Having heard nothing for a week or two, I made the first of several long, costly and generally fruitless telephone calls. No-one knew anything of my disc or covering letter, no-one bothered to ring back... To be brief - eventually I received a letter from Miss Scutt advising that after consultation with her Sales Manager it had been decided that since my Omnis had come from the U.S. at a lower price (from, incidentally, Blyth's wholly owned subsidiary) I would be charged £25 for this upgrading. For such a small service, this seemed to me mean-minded, and after the runaround they had given me, added insult to injury, and I wrote to Mr Niroo Rad, the Sales Manager saying so., adding however, that I was sending the £25 under protest since I could wait no longer.

A week later I received a rather confused letter from Mr Rad, returning my £25 cheque as "incorrect" and telling me that I was both rude and ungrateful; that I could now expect to pay £88.50 to Blyth or alternatively £195 to Apple to have the upgrade carried out! Perhaps this is an isolated occurrence. I hope so since Omnis 2 actually seems to be an excellent product. But I cannot help but suspect that this is yet another example of the cynical disregard that so many companies in this field have for their customers - once the sale has been made. Certainly it illustrates the now familiar yawning gap between P.R. image and reality.

In conclusion, I would like to suggest that the user's group compile a list of suppliers graded according to customer satisfaction in terms of sales and service, to be made available to members on request, if not published in each issue. For starters I would give Dark Star Systems 10 out of 10, A.C. Interactive 8 out of 10, Citech 7 out of 10, and Blyth would come somewhere down the bottom of the scale. Yours sincerely

Geoffrey Williams

Dear Jim

Thank you for offering the opportunity to put forward our point of view regarding the comments made by Mr G.M.P. Williams of the Good Book Company, Farnham in Hants.

My letter dated 25 July to Mr Williams clearly stated the options open to him and rejected his causes for complaint as we believed there were none.

We pride ourselves on comprehensive support to our users and indeed our success stems from its support as well as continual development of our range of software.

Mr Williams has chosen to ignore the services we offer to our registered users on the basis that he purchased the product from a subsidiary company in another country. I refer to my letter again, we do not support users purchasing our products from our distributors or subsidiary offices in different parts of the world. A policy which has been in operation for a long time and will continue to be so.

In conclusion, I would suggest that Mr Williams compares the services we offer to those offered by other international software companies, and he will soon come to realise how simple, cost effective and

useful they are.

I regret that this situation has been brought about, but will maintain our position on the matter.

Thank you again for allowing us the opportunity to discuss this matter with you direct.

Yours sincerely

Nirao Rad  
U.K. SALES MANAGER  
BLYTH SOFTWARE

{Reply}.....

Our advice to Users purchasing products directly from the USA, is that you do it 'at your peril'.

The laws relating to trading in this country do not extend to products brought in from abroad, therefore even if the manufacturer operates from the UK, you have no redress.

We have printed both sides of this dispute and would add that the practice in the USA is to charge for any form of back-up in addition to the product price. Hopefully this will be a useful lesson to others who purchase directly from abroad!

✱  
Letters on any Apple  
subject are always  
welcome

## SPECIAL PRICES ON COMMUNICATIONS PRODUCTS

Data Highway communications package for the Apple II  
**£54**

Nightingale 1200/75 300/300 modem with Data  
Highway **£146**

Mastercard serial card with Nightingale and Data  
Highway **£195**

Palette colour card with Mastercard, Nightingale,  
Data Highway **£254**

Linnet V21 V23 speed buffered auto dial/answer modem  
**£136**

Series Four V21 V23 basic modem upgradeable to V22  
and V22bis **£259**

All prices include carriage and VAT

### ***Reviewed in this issue:***

Apple II cards from The Computer Factory  
at very special prices for Apple 2000 readers:

**+Extended 80-Column Text Card (Ile)      £39.00**

**+Real-Time Clock Card      £59.00**

Prices INCLUDE VAT & delivery.

The Computer Factory Ltd  
38 Knowsley Road  
Liverpool      L19 0PG

**051-427 3144**

# APPLEWORLD 86



It seems that many people are of the opinion that AppleWorld was a huge success and I've heard nothing but exclamations of delight from those who were fortunate enough to speak to Woz, or hear his lecture.

In case you haven't heard Apple2000's most distinguished recruit during the show was member number 001 who is none other than the Woz himself! He spent some time on our stand where he chatted with other enthusiasts and autographed copies of our magazine.



Woz gets a tie

We understand that the dealers did some good business during the show and it was apparent that all the User Group



Our friends from MacTel

stands did well. The Apple2000 stand was besieged by enthusiastic visitors throughout the show and most people who served on the stand came away convinced that John Wayne had it easy at the Alamo.

The Apple2000 rainbow ties certainly created an impression, 'once seen never forgotten' is a description that was never more aptly applied (we hear that they created a fair bit of interest at Hemel Hempstead). A number of people who saw the ties immediately stated that they were an eyesore, totally lacking in taste, and awful to boot! Many of them then demanded to know where to buy one! Some visitors were heard to be trying to figure out the reason for the ties bearing

horizontal bands of Apple colours running from bottom to top, the reason is of course quite simple, but since nobody will tell me what it is I can't tell you either.

The first public appearance of the GS revealed that Apple have another winner on their hands. Like its predecessors in the II range the versatility built into the GS should produce many sales, and should help Apple to recover some of the ground that was lost by not previously adequately updating their open architecture machines. Let's hope that the GS is further developed and supported and not neutered in an attempt to sell more Macs.

AppleWorld underlined the fact that the Mac is a superb machine which has a great future, it also confirmed the renewed commitment of Apple Inc to the II open architecture range. Viewed in combination with the many excellent additions and software from Apple and other sources, the future should be good for us and Apple.

Generally speaking Apple (U.K.) are to be congratulated on the successful organization of this first AppleWorld show and I'm sure that most of us want to see it repeated. There were however a lot of unhappy people around who were invited to apply for tickets for the user forum and then couldn't have them because of the smallness of the venue.



Woz talks to the users

# APPLEWORLD 86

## People seen at the show



' Mr UK. '



Desktop Publishing explained



Hitchhikers Guide to where?



Apple apples



A new member signs up



Keith Phillips



David Jones



Busy times at Apple2000



Mr 'PageMaker'



O.K thanks Apple!  
Now when does Woz  
come back?

# Cirtech Cachebox

By Tracy Rose

How many times have you had to wait around for your printer to finish printing before being able to continue programming or using your machine for other work?

Your APPLE's ability to output data to the printer far exceeds the printer's capacity to print it. A print buffer stores this data and outputs it to the printer at a speed at which it is able to print. Limited in size usually to 64k or less the output from larger jobs frequently fills the buffer and the computer is again unable to free itself for new tasks. With the advent of the new 256k chip this has all changed. Enter the BIG buffers.

The Cirtech Cachebox submitted for review was the fully-fledged 512k version which also allows serial or parallel input and output. Other models available offer 256k or 512k and a choice of parallel and serial input/outputs.

The Cachebox, itself, is housed in a small box approximately 5.25" square (that rings a bell) by 2" deep. A small power pack to power the unit fits into a 13 amp. socket (yes, yet another socket) and supplies low voltage via a 2 metre lead. A fold-out user manual giving clear instructions on installation and operation of the buffer is also included.

A bank of six DIP switches at the rear of the buffer provides baud rate setting for serial connection, serial/parallel designation for both input and output interfaces and also serial frame size. Installation is fairly simple using the manual (it is preset for parallel). One strange but perhaps insignificant comment would be that convention dictates the orientation of the Centronics input socket and on the Cachebox it is upside down.

You might be excused for wondering whether 512k may be rather large for general use. 400 pages of single spaced A4 sheets is probably bigger than the average output file! When you get into the world of graphic dumps this can be only six or seven A4 sheets. The Cachebox is therefore ideally suited to

this task.

There are two main modes of operation and also an interface test mode which allows you to do a wrap test on the box itself. I would like to have seen a test message capability to print to the printer as this would help diagnose connections to the printer. Buffer mode operates as described earlier and copy mode gives the user the facility of multiple printouts of data already held in the buffer. The method used to select the number is to press the copy button, the copy indicator flashes on and off for two seconds, during which time further depressions will invoke further copies.

Copying starts after the copy indicator stops flashing and remains on during printing. To stop copies another depression of the copy button will start the flashing again for two seconds before stopping. Cirtech state that you may select up to 65535 copies! The drawback is that if you want a more modest number of copies - say 25 - you will still have to press the copy button 25 times. Perhaps an easier method of entering the number of copies and an indicator showing the number of copies remaining to be printed would be helpful.

## FOR THE TECHNICALLY MINDED

The Cachebox was tested firstly in the normal way by connecting it between my APPLE ][ and my Epson MX-80 printer - using the parallel input and output. This soon proved to be time consuming with 512k of print to be outputted. I then decided to replace the printer with my other APPLE and use the serial output of the Cachebox as input. To test the buffer at full speed input, a simple machine code routine supplied data as fast as it could be directed to the parallel interface card. Another machine code routine on the second machine loop tested on the serial interface and checked the input. As expected no errors resulted. A small point was noted that when the buffer gets full it requests data from the computer output, byte by byte, at the printer output speed. It would be nice if it had done this in say 256 byte blocks which would have freed up the computer for other work. Not many people would regard this as a disadvantage owing the sheer size of the Cachebox buffer.

A couple of points on the RS232 interface. The lack of dual baud rate switches means that if you are using a low baud rate output to a printer then you are stuck with the same baud rate

input - if input rate equals printing speed then no buffer! This minor point would only effect those printers liable to be found in museums. The other RS232 point - the output and input pins are incorrectly labelled in the manual. So the "technical" beware of pins 2 and 3 if you require to make up a cable. I can see in my crystal ball an even more intelligent printer buffer with multiple inputs and outputs to allow routing of print outputs. Also serial inputs, and maybe data compression - but now I am rambling on!



## FOR THE NON-TECHNICAL

Despite the fact that you will need an extra 13 amp socket for the power supply it is easy to set up. The interface cabling is of a sensible length. You will not need additional cables. As the operation of the buffer is totally transparent no special software is needed. A feature you may like to see which isn't there is an LED to tell you whether the power is on or off.

Cachebox is ideal for either text or graphics. It is a great timesaver but bad news for printer coffee breaks.

## CONCLUSION

To summarise - the CACHEBOX is the state of the art in printer buffers in that it probably has the largest amount of storage around. This together with its flexibility of serial and parallel interfaces and its multiple copy facility makes it a good investment.

Remember when purchasing you need to consider future needs. For instance you may want a parallel buffer at this stage but are you likely to need to use a serial mode at some time ?



The Cachebox is available from:

Cirtech (UK) Ltd, Currie Road Industrial Estate, Galashiels,  
Scotland TD1 2BP Telephone 0896 57790

### We have received the following message regarding the Cachebox Review from Cirtech.

1. Regarding Test modes we agree that it would be nice to have this facility but unless the Cachebox output and the printer cable/connections were connected and working correctly, you will not be able to print any message, so you will not get any diagnostic help if things are wrong.
  2. If the Cachebox had less than 256 bytes of space left it has to wait for that amount of space before it will allow any more data in, even if only a few bytes are remaining to be sent from the computer, thus making the delay longer!
  3. If the Cachebox has data in it, the data LED will be on. If no LEDs are on, pressing the empty button will flash both LEDs.
  4. The reviewers crystal ball will soon see some action as we are currently developing a multiple buffer with dual input and output ports and a 2MB Local Area Printer Network Buffer for upto 16 Computers and Printers. - Howzat.
- Thanks for reviewing our products and we will keep you posted on all our new products.

John Robertson (Cirtech UK Ltd)

### Editors Note:

First I would like to thank Cirtech for being so willing to supply new products for review and for their willingness to support the ordinary user. I wish all manufacturers were as USER FRIENDLY.

## SPECIAL RELEASE SOFTWARE

New Title

**THE EXAMINER by W Anderton**

The Examiner is a machine language utility for tracing, single stepping and de-bugging 6502 programs.

It runs on any Apple II, //e or //c with one disk drive, and it fully supports 80 column cards. It runs under DOS 3.3 and will use the 16K language card if present.

You can start tracing at any point in the program, and you can preset the registers before you start. You can re-enter the program with the ampersand vector.

A very full status display is given and the display can be placed either at the top or the bottom of the screen.

The Examiner is an indispensable de-bugging tool for program development.

**Price £14.50 post and packing and VAT inclusive.**



## WANTED APPLE II ASSEMBLY LANGUAGE PROGRAMMER

One of our Apple2000 members, has developed over the last year, a suite of routines to allow a WIMPS environment on any 64K Apple II machine. The routines use the standard Hi-Res pages of the Apple II and will interface with a mouse card or the mouse on a //c. They are intended as the user interface for application programs, and allow full use of multiple pull down windows, and support relocatable windows that can be opened and closed.

The routines have been developed to a high degree and an almost finished state, and are fully documented for inclusion in applications or any further development. The writer is unable to continue work on these routines, due to other pressures, and has offered them to Apple2000 to be available to other development programmers. He wishes to have some continued involvement in their future, and to also have a say in their possible commercial usage.

Anyone wishing further information please write to:

Apple2000, PO Box 177,  
St. Albans, Herts AL2 2EG

Enclose an SAE,

Mark envelope 'Please Forward: WIMPS'.





Edited by Norah Arnold

**M**y first thought on starting this column must be to thank all those members who took time at AppleWorld to come and offer encouragement in relation to our efforts with the magazine. I must be honest and admit that there are times when I wonder why I am sitting at the computer in the early hours trying to make the jigsaw of pages make some kind of sense. It was great to meet so many members of Apple2000, both old friends and new acquaintances.

### Keeping Cool

At the AppleWorld Show I met a member who had fitted his upgraded Macintosh Plus with a small 12 volt fan that moves about 10 cubic feet of air per minute through the machine. The fan was mounted on the upper right hand side of the machine. I was assured that it was quiet, but not having seen the installation myself, I cannot really judge. He argued that he had beaten the problem of fan noise by the proper choice of fan, and by a properly designed fan housing.

The amount of noise a fan makes is dependent on several things: the size of the fan, the speed of the fan, the pitch of the fan blades, and the type of fan. Choose a large fan with a high blade pitch and comparatively low rotation speed, you'll have a fan which is reasonably effective, but is also reasonably quiet. While the newer piezoelectric fans are completely silent, they are not very effective.

It appears that in order to fit a fan one does need to have some technical expertise in soldering and using a voltmeter, and the kind of temperament that does not get butterflies in the stomach at the thought of opening up your Mac and operating on its insides.

This particular person had installed a fan under the presumption that keeping his Mac cooler would minimize the risk of component failure by reducing the operating temperature of his machine. Once the fan was in place he began to worry about the risk of his Mac

becoming clogged up with dust and choking to death.

The Macintosh was designed for efficient convection cooling, assuming sufficient space is left around the sides and top. An inch or two should be kept clear on each side of the machine and six inches or so on the top. Those Mac owners who developed the habit of placing their external disk drive on the top of their machine soon found out that if the top is blocked, problems are likely to develop.

Owners do, however, often forget the importance of the front cooling vent. I have been told that almost all the air pulled into a normal Macintosh, ie. one without an internally mounted hard disk or piggy-back memory expansion boards, enters through the front vent rather than the back or sides. Obviously one of the easiest ways to make your Mac overheat would be to push your keyboard hard up to the front of your machine and block the intake of air into the front vent.

I doubt whether I shall ever be tempted to take the advice of Tom Swain of BMUG and install a MacChimney. Tom found that when he followed conventional wisdom and installed a fan, his 'friendly unobtrusive workstation was transformed into a hissing and obnoxious desktop troll'. His answer, the MacChimney, is a cardboard tube protruding thirty inches from the top of the Mac, which exploits 'free convective laminar flow in a vertical duct'.

### Inside Macintosh on disk?

A Macintosh programmer has to read most of Inside Macintosh at least once, and consult it whenever he or she wants to recall the syntax or semantics of a specific function or procedure. Inside Macintosh is a book of 800 pages describing well over 500 routines. Information needed frequently during programming, which should be easy to retrieve, is often difficult to locate within Inside Macintosh, as it is poorly indexed.

As a solution, MacMan and

DAMacMan have been developed at Oregon State University as tools for the Macintosh programmer, not the casual user. Two database systems were written, tested, and made fully operational on Mac Plus, or Mac XL.

MacMan is a desktop application that retrieves Inside Macintosh information relating to a procedure/function name, or alternatively, according to toolbox manager category. Macman provides multiple resizable windows, scrolling, text wraparound, and copy/paste between database and clipboard.

DAMacMan is a restricted form of MacMan that does what the desktop version of MacMan does, but runs as a desk accessory. It does not support multiple windows, but can be used concurrently from within any application, such as a text editor.

### LaserWriter paper

Boston Computer Society Publishing Group recently held a presentation on paper, in particular laser printer paper. The presentation was given by a paper distributor, who described Laser Plus paper developed by a company called Hammermill which has been ahead of the others in the development of paper for new technologies like the LaserWriter and Xerox machines. The Laser Plus paper has two important features. One side of the paper has a "wax hold-out" which means that you can use a waxing machine on that side only for manual paste up of your printout.

The other main feature is a rather smooth surface that permits fine resolution and avoids the problem of toner "spray" getting absorbed into the paper and making fuzzy images. The paper also has relatively high brightness ie. it is very white, and has good opacity. The paper is reported to be selling for about two cents a page.

There have been rumours in the United States that Adobe has created a new fast 68020-based controller to go into Laserwriters, etc. This means that we

may perhaps shortly see announcements of a Laserwriter II or something similar, rendering the present Laserwriter obsolete, or at least making it a slow alternative.

## Right to Left WP

For anyone wanting to be able to do word processing in Arabic and Persian on the Macintosh there is now available a package named Al-Kaatib from Arabic Software Associates, 240 E. Center St., Provo UT 84601. (801) 377-4558. Although Al-Kaatib may be used as a stand-alone word processor, it finds its best use as a pre-processor for strings of Arabic/Persian text, composed from right to left as they should be, which are then transferable into Word or MacWrite. Right tabs make alignment easy, and as long as either the application or the relevant system file has the fonts installed, beautiful Arabic script appears on the screen. This pre-processor approach seems most sensible, since one does not always want have documents in different formats and with differing conventions.

It also seems reasonable that this program could, with the correct fonts installed, solve the right to left text insertion problem which several members mentioned to me during the AppleWorld show.

## MacApp Group Starts

MacApp users have announced the formation of the MacApp Developer's Association. Their goal is to provide technical support and information to fellow developers who are using Object Oriented Programming languages. They are hoping to publish a regular, perhaps monthly, newsletter addressing the concerns of MacApp users. They will also provide, maintain, and support an Object Library for developers.

As a developers association they feel it is important to provide an informal electronic mail question and answer service where members can get answers to their MacApp questions.

Their original organizing effort is supported by Apple Computer but they anticipate becoming a fully independent organization through the participation and support of members.

Details concerning access and distribution of the object library will be published in the first newsletter. Tentatively the Q&A service will be conducted using MCI mail. The cost to join is low, there are no connect charges

and the price to send a short, well phrased question is very small; contact MCI at 1-800-MCI-MAIL to obtain an account. The MCI mail ID is MacApp Questions. The most useful Q&A's will appear in each newsletter. If you wish to receive the first 6 newsletters, contact the MacApp Developers Association, P.O. Box 23, Everett, WA 98201-0023.

## New PageMaker

PageMaker 2.0 will be able to read MacWrite, Text-only, Microsoft Word, MacPaint, MacDraw, Microsoft Works, MacDraft, FullPaint, Cricket Graph, PICT, Cricket Draw, and Postscript files via the Place command. There is a 90,000-word dictionary to which you will be able to add 1,000 words of your own choosing.

There will be two forms of kerning. Automatic pair kerning will work with pre-defined pairs of characters established by the font manufacturer. Manual kerning is the other option, via the keyboard, to loosen and tighten the space between any two letters.

For justified text, the user has the option to control the maximum and minimum amount of spacing. Letter spacing is the inter-character spacing which automatically adjusts the space between letters within a line of text to eliminate excess white space. With paragraph spacing you will be able to specify additional space before and after paragraphs in half-point increments. PageMaker 2.0 now supports leader-filled tabs. This feature will fill the space preceeding tabs with thin-space periods, dashes, underlines, or user defined leaders up to two different characters. With a single menu or keyboard command, a portion of text can change from upper case to lowercase, etc.

With a new numbering system, 2.0 creates files of up to 128 pages. Combined, you can have numbered pages of up to 9,999 pages. The five interactive viewing sizes can be displayed as single pages or facing pages. With a facing page view you can work on a double-page spread without having to shift back to left/right pages.

There are new line styles such as half-point and reversed. Half-point fills the gap between the hairline and the one-point line. With the reverse command any line style will reverse white out of black.

You can now resize the length or width of a column by dragging the mouse. Editing can now be done through

keyboard shortcuts. There are also cursor control keys for text modification. You now have the ability to select either an entire story or all the objects on a page with one command. Selecting an entire story allows you to make global changes such as text attributes or point sizes for the whole story. Text blocks can be moved quickly on screen by pressing the mouse. This way you can drag a box outline of the desired object. If this isn't suitable, by pressing the mouse down a little longer, you will see the complete image.

Postscript graphic files can now be placed in PageMaker where they can be scaled and cropped. If a screen image of the graphic is included with the PostScript file, it is displayed when the file is placed in PageMaker. Otherwise no representation will appear. A box outline representing the exact size will otherwise appear. You can even place a PageMaker page in your PageMaker documents!

An image that had been cropped to fit a given space can be scrolled to expose a different part of the original image.

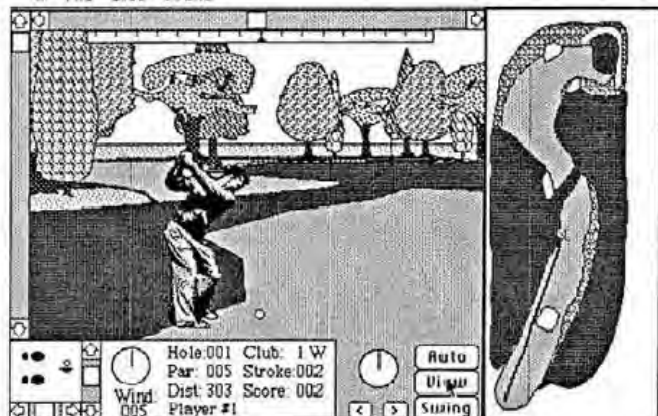
Screen positioning of line endings is an exact representation of their printed version. Accuracy of rulers, line styles and positioning has been improved for every page view. PageMaker 2.0 will support spooling using Apple's new print spooling protocol. PageMaker will calculate ideal enlargements and reduction factors based on the printer's resolution, for bit-map graphics. This will eliminate irregularities in bit-maps with regular patterns. There will also be automatic tiling for documents that are larger than 8 1/2 by 11. Automatic crop marks on final documents will be printed where it should be trimmed.

PageMaker now has a built-in mechanism for crash recovery. Damaged files can now be restored to the state of the last turned page.

## Oasis

Most of us have used miniFinder or WayStation as a replacement for the Finder, and now another choice exists in the shape of Oasis. Version 1.1 of Oasis is an ultra-fast Finder replacement that is user-configurable.

As many buttons as you like can be added as long as you can fit them in the window. It includes a number of utilities for file management. It has the ability to launch documents along with applications. Oasis works only under HFS, and is 'shareware'.



new... new... new...

## Dark Castle

Can you defeat the Black Knight, evil ruler of the Dark Castle? Action is hot and heavy as you battle your way through stunning graphics and smooth animation that will take your breath away... an arcade/action game so big it fills two disks... hectic, frantic... but most of all FUN!!

## Silicon Press £74.95

The colour print solution for the Mac. A utility for printing labels, cards, or full-page layouts - whatever size you want - in colour on the ImageWriter II. Text & Graphics can be mixed freely, & information can be merged from most database programs. Full LaserWriter support. "Silicon Press takes desktop publishing one step further. It is pure genius"

## SUPERPAINT

The ultimate paint/draw/publishing program. Only SuperPaint lets you mix bitmap and object graphics artistry and design on screen at the same time, and print them correctly on the LaserWriter. Only SuperPaint gives you LaserBit™: 300 dpi bitmap editing. Only SuperPaint gives you the power to pattern your text including laser fonts. SuperPaint also fully supports colour printing on the ImageWriter II. There's too many unique features to list them all here.



only £90.00!

The end of the MacPaint/FullPaint Era!

## WORLD BUILDER

An Authoring system for creating stand-alone interactive graphic scenes accompanied by text and digitized sounds. World Builder was used to create the highly acclaimed Enchanted Scepters adventure game. Now you can create your own games, or use it to create interactive training, story boards, etc. There's a World of possibilities awaiting you!

£74.95



THE WAVE OF THE FUTURE  
Authorised UK distributor

MacSerious Software



## Mac 3D v2: £199.00

is the 2 & 3D object-oriented graphics package with auto-dimensioning, a 22-shape tool palette, hidden line removal and lath-like shaping tools. Version 2 expands the range of powerful features to include automatic shading and a massive speed increase. Call for full details.

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In the UK: £2.00/order  
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# Write now

The ultimate word processor from T/Maker  
Multiple columns on screen. Graphics embeddable within text, and lots, lots, more...  
all for £165. Not copy protected.  
(This is the one Steve Jobs bought!)



£39.95

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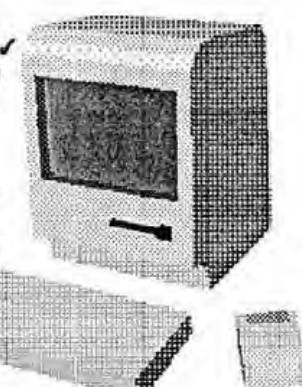
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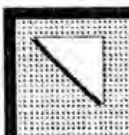
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# APPLE ACCOUNTING

by Irene Flaxman

I have had the opportunity to try out the new Apple Accounting package for the Macintosh - in fact, I have completed Apple's training course and have the certificate to prove it!

It really is an impressive system. Anyone reading the Arthur Young report will know that it compared very favourably with the Pegasus system, and a number of strong features were highlighted. As with all Macintosh programs, the suite is really easy to use. The programs take full advantage of the Macintosh's operating system to ensure this ease of use, even for a novice.

Initially, only three modules were available (Sales Ledger, Purchase Ledger, and Nominal Ledger), but these have now been supplemented by the Sales Invoicing and the Stock Control programs. Programs can be used in isolation or they can be used in conjunction to provide a fully integrated accounting system - the choice is yours!

As with all accounting packages, you must devote some time in planning your 'Chart of Accounts' before you start, - decide what you need from the system first, this enables you to decide on how to analyse information, and thence the coding structure. This is the most taxing part of implementing an accounting package, but is worth the effort! As ever,

### It really is an impressive system

it is advisable to consult your accountants, as their acceptance of your records is vital.

Obviously, the Sales, Purchase, and Nominal Ledger programs provide all the usual accounting functions for recording the income and expenditure of your business, such as posting invoices and cash transactions and transferring between accounts. You can choose the most appropriate break points for Aged Debts Reports, set discount or surcharge rates and rules - all can be applied 'across the board' or can be set for individual accounts.

In addition, there are some nice features

which are not always provided by accounting systems, such as bank reconciliation reports and posting of standing orders (a real time-saver). Another feature that I really like is the flexibility of reporting. The standard financial reports you will require are already set up for you (Balance Sheet, Profit and Loss Account, etc), but you can tailor reports to your own requirements, and can define your own

### Tailor reports to your own requirements

reports very easily - this, in conjunction with the personalised chart of accounts gives the system flexibility.

Posting from Sales or Purchase Ledgers to Nominal Ledger was not automatic in the original version. You were required to initiate the Nominal posting, but this involved the issue of a single instruction and was not onerous. The latest version will allow you to select between automatic or 'manual' posting between ledgers - dependant upon your own preferences and control systems.

The Stock Control program allows for different pricing levels, discount levels, and cost prices. If a special offer is available for a set 'package' of goods, this can be specified (and priced) as a separate item, when any increase or decrease in stocks of the package will be reflected in the stock levels of individual parts of the pack. Price changes can be entered in advance, but the program will continue pricing at the old rate until the specified effective date - this is another useful feature, as it will allow you to print out your updated price list in readiness for the change-over.

The Sales Invoicing can be integrated with Stock Control to allow for automatic pricing of goods invoiced and to keep the stock records up-to-date without duplication of data input. Invoices and other documents can be tailored to your own requirements, and

you can import information from other files if you wish (e.g. stock records, customer details, standard trading terms, etc.). The Sales Invoicing program also ensures that all relevant records are updated - including the sales ledger, stock levels and cost of sales.

Finally, we must mention the interface with other software - notably spreadsheets such as Excel or Jazz - just imagine the capabilities this gives you, to ask 'What if' questions, present your figures as graphs, etc - all with minimal effort? Originally, it was only possible to export information from the system but now you are also able to import information from other sources - very useful if you already have your accounting data recorded by another application.

I have mentioned some of the more unusual features of the package here, and have not dwelt on detail. I have been promised a sight of the latest version, but unfortunately this did not arrive in time for me to look at it before this article was completed. The Apple Accounting team

### Multi-user version coming

are now working on a multi-user version of the program - in fact, the multi-user Sales Ledger was being demonstrated at the AppleWorld Expo, so we should not have a long wait before we see it on general release. This is taking priority over other extensions which might be desirable, such as Payroll and Fixed Asset Accounting, but the former can be incorporated by using the DBS Pay system (which has an interface to the Apple Accounting suite), and the latter could surely be incorporated by the use of Excel or Jazz to calculate the necessary accounting entries, so I think that they have set the right priority.

Overall, I am impressed, and I have used a number of accounting systems during my working life. If you want to know more, just let me know and I shall be happy to pass on some information to you.

# COMICWORKS

by Norah Arnold

Although ComicWorks is sold primarily as a comic book layout program, it is also a paint program, a text editor, and comes with a library of clip art. It is important not to let the comic-book aspect of this program put you off and blind you to the possibilities inherent within ComicWorks. After all, a comic is a highly complex combination of text and graphics and every page of a comic has to be creative, flexible and even startling.

Comicworks comes from MacroMind®, Inc., who produced it with the cooperation of Mike Saenz, of 'Shatter' fame. When you buy ComicWorks, you get a Comicworks program disk which also contains Strider Software's PosterMaker™. Also included are two art disks which contain a complete comic art library, several short comic book stories, templates for greeting cards, storyboards and newsletters. There is also a clearly set out manual with over a hundred pages.

In ComicWorks, a document is made up of one or more pages, each of which can hold many panels. A panel is an area on the page which can hold within it both text and graphics. Easels are the special graphics areas within panels, and the special text areas are called balloons, in keeping with comic-book traditions.

## Tools



## The Tools

The Tools panel is easy to use and presents no problems to anyone familiar with MacPaint. At top left is the New Panel Tool which is used to draw a new panel on the page, while the window scrolls to accommodate the size. Next to this is the New Easel Tool which you use to draw an easel in a selected panel. If no panel is selected then one will automatically be created of the correct size to contain the new easel. On the second row from the top are the Easel Selector, which enables you to step through all the easels in a panel or panels in a document, and the New Balloon Tool which is used to draw a new balloon in a selected panel.

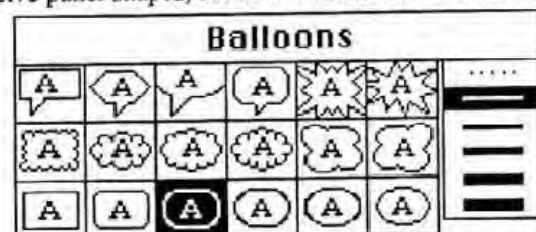
Many of the other tools work almost exactly like their counterparts in MacPaint, with the exception of the Airbrush. The Airbrush is one of the most versatile and helpful tools that I have ever come across, and I am sorry that I have had to wait until the appearance of ComicWorks before being able to benefit from it. This tool sprays a variable-sized, random spray of the current pattern. The size may be controlled broadly by the number keys, or finely by the + and - keys, which vary the spray size in one-pixel increments. The Airbrush spray can also be toggled between white and black for the creation of special effects. There are also facilities to vary the density of the spray or to create transparent spray.

## Panels, Easels and Balloons

Why should anyone want to bother with the complexities of panels, easels and balloons when it is quite tricky to get the best out of them when you are new to ComicWorks? You do

have to spend some time playing with the tools, creating things just for fun in order to get to know just what can be achieved with them. A panel, for instance, can be moved, cut, copied, pasted, and cover two whole pages in area if you desire. There are twelve panel shapes, six of which can be customized.

Panels can be thought of as windows into a document, and easels inside a panel can normally only be seen through the window, but the clipping effect of panels may be turned on and off with the Clip Exception command. Each panel can contain up to sixty-four easels.



Whereas easels can contain only graphics, balloons differ in that they contain only text. Text inside a balloon can be manipulated just as in MacWrite™. In other words you may have multiple fonts, styles and sizes all in one balloon. Text can be cut, copied and pasted just as in MacWrite, and text from Word™, ThinkTank™ and Macwrite can be pasted into balloons. There are eighteen different styles of balloon, and the six in the top row of the Balloon Styles Panel are re-shapeable.

## Priority Levels

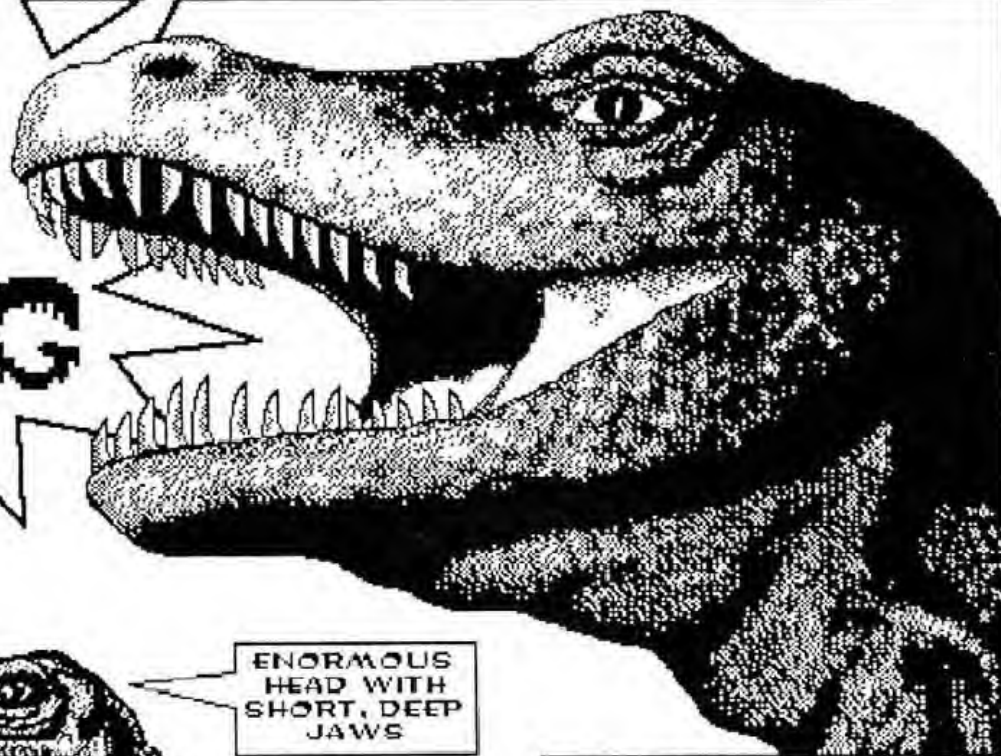
The last thing you created has priority over the previous creations, ie. it will be seen in front of them. Easels, panels and balloons are normally opaque, but they can all be made 'see through' by the use of the Transparent Paper command in the Feature menu. Used together, these two features of priority levels and transparent paper make ComicWorks into a highly professional page-making system for anyone interested in combining text and graphics in a lively, unconventional manner. There is no need for a picture to be re-drawn several times if only small changes are needed. A new easel containing the changed features may be used as an over-layer. This enables the creation of a library of graphics which can be combined, superimposed and manipulated in a variety of ways.

## Thin and FatBits

ComicWorks FatBits has three levels of magnification; and the FatBits screen appears on whichever side of the main screen you were not working on. ThinBits is the opposite of FatBits and when selected gives a Show Page miniature of the currently selected page with all the tools, commands and features still available to be used.

For the examples of artwork on the following pages I decided not to use the comic art provided but to show how ComicWorks is useful to me in producing educational artwork quickly and with the minimum of hassle. I had hand drawn the dinosaurs previously in MacPaint long before the advent of ComicWorks. For the first I started by creating a panel

# THE KING



DAGGER  
LIKE  
TEETH

ENORMOUS  
HEAD WITH  
SHORT, DEEP  
JAWS

TYRANNOSAURUS REX  
'KING OF THE  
TYRANT LIZARDS !

SHORT, FLEXIBLE  
NECK

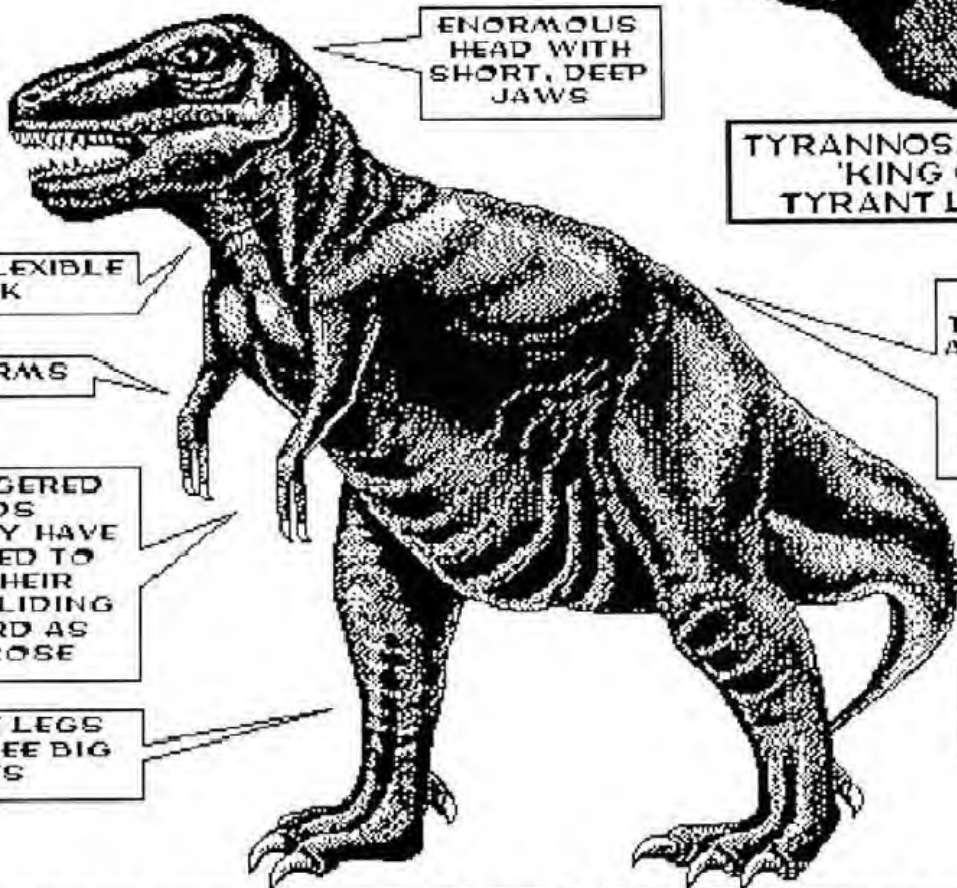
SHORT ARMS

TWO FINGERED  
HANDS  
THESE MAY HAVE  
BEEN USED TO  
STOP THEIR  
BODIES SLIDING  
FORWARD AS  
THEY ROSE

MASSIVE LEGS  
WITH THREE BIG  
TOES

SHORT  
TRUNK AND  
A BROAD HIP  
GIRDLE  
FUSED TO  
THE  
BACKBONE

HEAVY,  
MUSCULAR  
TAIL



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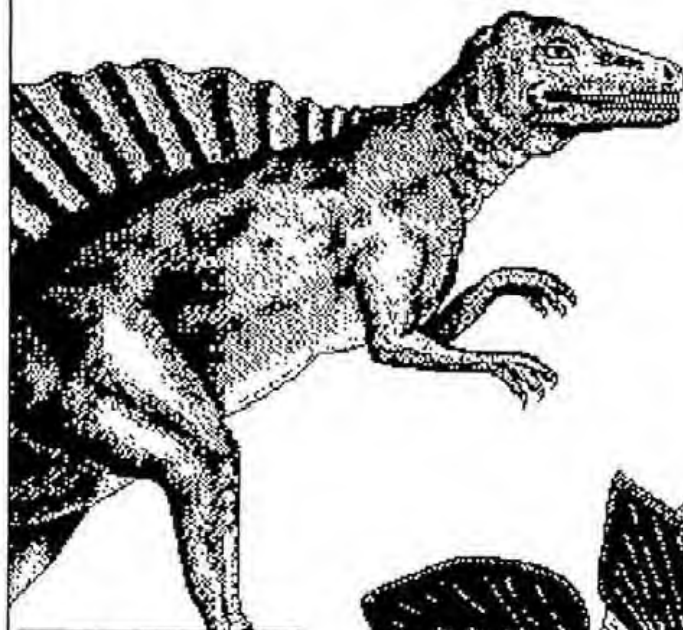
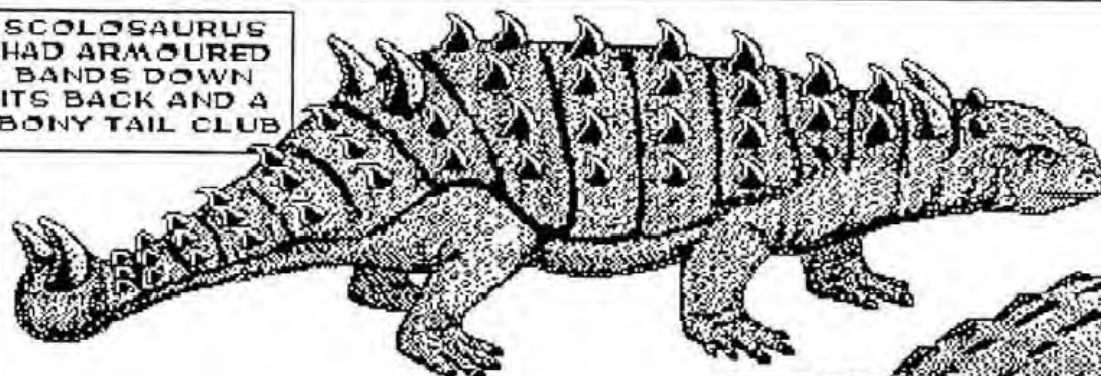
THE TYRANNOSAURIDS INCLUDED SOME OF THE BIGGEST FLESH-EATING LAND ANIMALS OF ALL TIME. SOME SCIENTISTS THINK TYRANNOSAURIDS WERE THE MOST SAVAGE CARNIVORES THAT EVER ROAMED THE EARTH. OTHER SCIENTISTS THINK THEY WERE TOO BIG AND CLUMSY TO CHASE OTHER ANIMALS AND PROBABLY ATE ANIMALS THEY FOUND ALREADY DEAD.

the size of the page and then loaded in the two pictures on to two separate easels using ArtGrabber+, which is provided with the ComicWorks system. Moving into ThinBits I moved the two easels until I was satisfied with their position and the degree of clipping of the upper picture. Next came the Balloon for the title and I needed Transparent Paper mode to position this, and Clip Exception was used to enable the points to

extend beyond the panel. The lower text areas were created quickly and easily using a balloon which has three small 'handles' in the centre of each side which can be pulled out to create pointers.

When creating the second page I came up against the only difficulty I have had with this program, ie. it does not know of the existence of A4 size paper which I use constantly, US letter

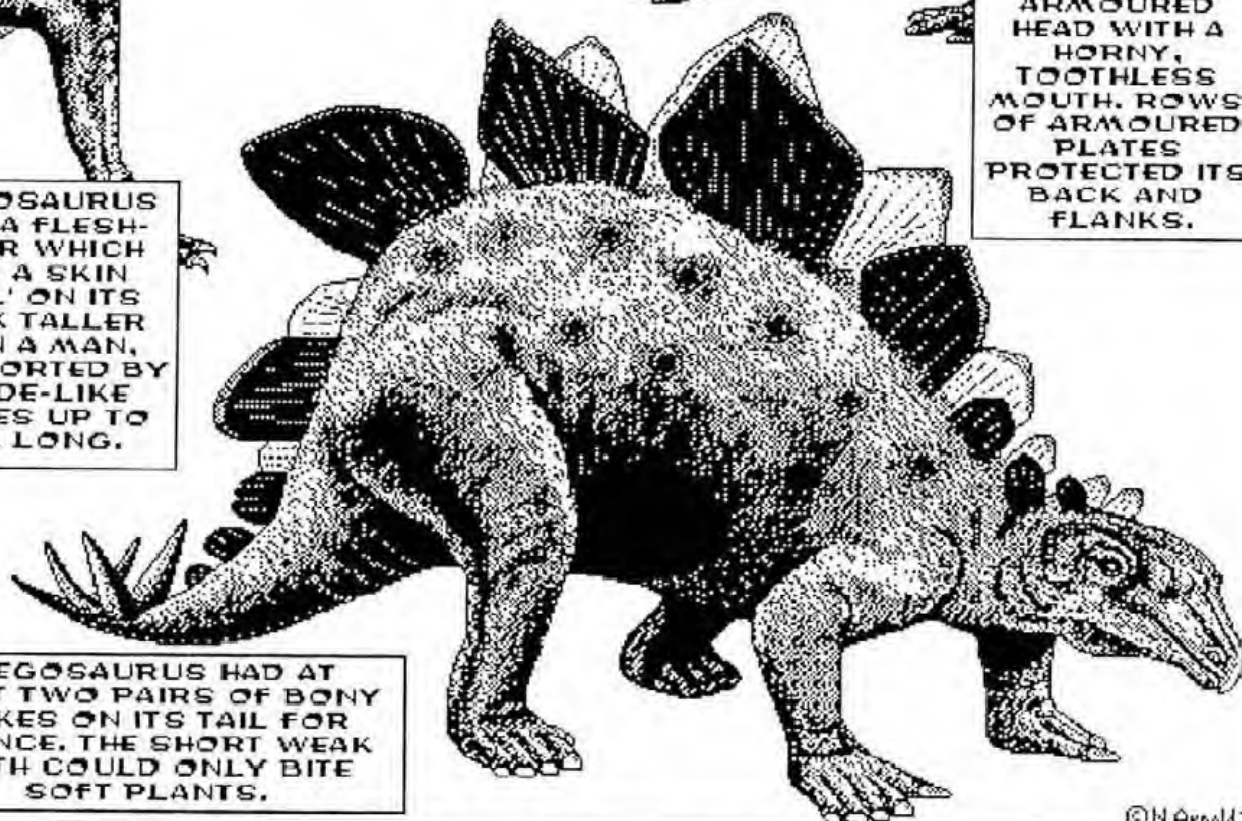
**SCOLEOSAURUS**  
HAD ARMoured  
BANDS DOWN  
ITS BACK AND A  
BONY TAIL CLUB



**SPINOSAURUS**  
WAS A FLESH-  
EATER WHICH  
HAD A SKIN  
'SAIL' ON ITS  
BACK TALLER  
THAN A MAN,  
SUPPORTED BY  
BLADE-LIKE  
SPINES UP TO  
1.8M LONG.



**ANKYLOSAURUS**  
HAD AN  
ARMoured  
HEAD WITH A  
HORNY,  
TOOTHLESS  
MOUTH. ROWS  
OF ARMoured  
PLATES  
PROTECTED ITS  
BACK AND  
FLANKS.



**STEGOSAURUS** HAD AT  
LEAST TWO PAIRS OF BONY  
SPIKES ON ITS TAIL FOR  
DEFENCE. THE SHORT WEAK  
TEETH COULD ONLY BITE  
SOFT PLANTS.

© H. Arnold 1986

is as far as it goes. Because I had no LaserWriter to try out the direct laser printing from ComicWorks, I decided to save my pages as MacPaint documents and then load them into PageMaker™ with the rest of the article, to be printed later. I was annoyed to find that my pages were a quarter of an inch too narrow. So, I went back to my original ComicWorks document, put a grid on and pulled the handle of the panel over

to extend it exactly the correct amount. Easy!

I have not mentioned the excellent poster making and card printing facilities but as you have probably noticed by now, I like this program. The examples I have shown are very simple ones compared with the complexity of which ComicWorks is capable, and it may be this complexity which makes the program unsuitable for some. At approx. £70, good value. 🍏

# LASERSPOOL

by Irene Flaxman

**A**t last, there is a cheap way to free your Macintosh whilst a document is being printed by the LaserWriter. Laserspool is described as 'a utility program to perform multiple print spooling with the LaserWriter. A perfect tool to improve your productivity'.

The program is installed as a desk accessory on a Macintosh 512K/800 or Macintosh Plus system disk, and will then allow you to print in SPOOL, or deferred, mode - thus freeing your system as soon as the temporary print file has been written to disk. The desk accessory will work with any software that would normally use the standard LaserWriter driver. Unfortunately, not all software complies with this requirement and such exceptions (which include PageMaker and JustText) will not be compatible with Laserspool.

The program is very easy to use, as evidenced by the size of the accompanying manual - just 9 x A5 pages! To use the spooler, first install Laserspool on your system disk as a desk accessory - effectively, you must use either a hard disk or an 800K floppy disk; a 400K disk would not really be practical as you must allow sufficient space to create a temporary print file on your application disk.

You will then need to initialise

Laserspool. This is a simple procedure, involving the use of the command key, and the initialisation then remains effective until the LaserWriter is switched off.

Having initialised Laserspool, all printing will be done in SPOOL mode. As soon as the temporary print file has been created, the Macintosh system will be released so that you can continue to work whilst Laserspool completes the tasks associated with printing your document on the LaserWriter.

If several Macintoshes are connected to the AppleTalk network, they are each able to write their temporary print files regardless of any other activity on the network, so no extra delay is caused by other users.

All print jobs are queued on a 'first come, first served' basis, and each print operation will be performed as soon as the preceding one has been completed. Laserspool will also ensure that the housekeeping functions are controlled - as soon as a document has been printed, its associated print file will be deleted. All this is completely transparent to the user, who can continue using the Macintosh whilst Laserspool looks after the printing.

The Laserspool desk accessory can be used to check on the status of your print


files, or to cancel any of your print instructions if necessary. The facility to check a file's status is particularly useful if the LaserWriter location is remote from that of the Macintosh.

As several print files may be queued, each is given an unique name which includes the time of creation. Again, this is done automatically, but it ensures that there is no risk of corrupting the contents of files in the queue.

It is a pity that some software is incompatible, but this is the price incurred when the standard drivers are not utilised. I do not see it as a fault of the Laserspool program, but rather as a fault in the non-standard software - after all, the whole concept of the Macintosh system is that functions should be standardised regardless of who is writing the software.

I have used the spooler with several programs, and have invariably found that the printing process is much less tedious, as the delay is not noticed.

I have tested it out in a network situation (using MacServe), and have found that it manages the print queue efficiently regardless of the demands of several computers.

All-in-all, Laserspool is a very useful tool, and certainly improves the efficiency with which you can use the LaserWriter. 

## MacSNAP

Extra memory for the MacPlus

By Jim Panks

Many Mac Users are quite happy with the MacPlus and its 1Meg of memory, however when you are in the market for really using the Mac in desktop publishing or large databases then an extra Megabyte can be a really useful piece of kit.

The MacSNAP upgrade comes in two varieties - the first is a 1 Megabyte upgrade which will let you have a total of 2 Megabytes. The second is a 3 Megabyte upgrade giving you a total of 4 Megabytes.


The upgrade kit comes well packed with a large manual and

explicit instructions in making the change.

One point here was the way in which the manual covers the subject (you have to swap from one manual to another half way through the operation). This will be changed in the near future.

The kit is in effect four small boards that fit into the memory board slots on the motherboard. You have to piggy-back your normal cards into the new ones.

I have had the upgrade fitted by MicroServe, a local Apple Repair Centre (200 Court Road, Eltham, London) and will be reporting on the use and fitting in the next issue. The thing that makes this very handy at the moment is having a MEG RAM Cache.

The upgrade is accompanied by a Disk with a RAM DISK Utility and this works by loading your system, finder and applications and then ejects the startup disk. You then wizz around with almost no waiting for the finder or system to react to your commands. The product is made in the USA - however it is being manufactured by Glanmire of Dublin shortly. See our special offer on this good buy. We will continue in depth in the next issue. 

# KIDSTIME™

by Norah Arnold

**K**idsTime™ from Great Wave Software is a disk of five educational programs for very young children. It comes with a twenty-eight page manual which is quite adequate for this type of software. At the beginning of the manual there are very sensible suggestions to follow when allowing very small children to play with the Macintosh, such as not leaving them unattended, putting away small objects such as paper clips and pencils that can be pushed into the disk drive opening, and not allowing food and drink to be near the machine.



select to have lowercase, easy pictures or hard pictures. With the pictures,

KidsTime comes with a safety feature called a 'safety lock' built into it. This is to prevent young children from erasing part of a program or a game by mistake. Although it is impossible to use the drives or print while the 'safety lock' is on it seems a sensible precaution and is easily undone when you wish to modify the programs.

There are five programs altogether and the first of these is **Dot-to-Dot™**. When the dots appear on the screen the child moves the mouse so that the mouse pointer, in the shape of a cross, passes over the dot next to the number. The child does not need to click on the mouse and as the mouse goes over the number a very short tune is heard. If a number is passed over out of sequence, nothing happens. When the last number in the sequence is connected the outline picture appears. The labels next to the dots can be changed to upper or lower case letters as well as numbers. Although there are several files of dot-to-dot puzzles on the disk, you are encouraged to make up new puzzles of your own and the necessary instructions to do this are given. The sound feature of this game may be turned on and off when required. One of the nice things about this program is that it can be tailored to the exact needs of your child. If the child is only just learning to

recognize numbers to ten, then you can build a file using only those numbers and then select to show them in large print.

The next program is **ABKey™** and this is also about learning to recognize the letters of the alphabet and their position on the keyboard. If you double click on ABKey a single uppercase letter appears on the screen in large print. The computer speaks the name of the letter when the corresponding key is typed on the keyboard, and another letter replaces the first. There is no need to stick with uppercase letters, however, as you can

the child must type the first letter of the object in the picture, the word is then displayed and the computer speaks the word. To make the game more interesting there are five options which affect the difficulty level.

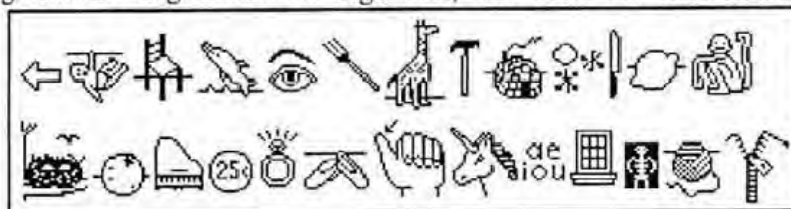
The next game is **Match-it™** where objects appear on the screen and have to be matched with each other. The child needs to use the mouse to drag the matching objects one at a time to the two empty boxes, and if correct the matched objects fly off to the side and make a pile of correct answers. If the child chooses non-matching items and drags them to the

empty boxes, the cards just fly back to their spot on the screen and the child can try again. Included on the disk are three types of Match-it games; matching, puzzle and matrix. New Match-it games may be constructed by use of the MatchMaker program. This program is only made available for purchase to those owners returning their registration card for KidsTime.

**StoryWriter™** is an easy way for the child and a parent to create a story together and then listen to the computer

reading it back. The disk comes with several stories already prepared, but it is nice for a child to have special stories put in about their own friends, toys or family. A child who is already beginning to recognize words could be helped to write their own stories, and to make them more interesting, pictures as well as words may be used in the story. A special font called Storybook is provided and the names of pictures in this font are able to be spoken by the computer. A child who is learning to write at school could use this program to practise writing stories and when the computer reads them back, could be encouraged to spot their spelling mistakes by listening carefully to the words. The story can then be edited to correct the mistakes.

Last of the five is **KidsNotes™** with which simple melodies can be created by use of the mouse or keyboard. The disk comes with several tunes already on it, but be prepared for the tunes of the nursery rhymes to be a little different from what you expected in places, after all the disk does originate from the U.S.A. I must admit to having spent quite a while playing with KidsNotes all by myself, just enjoying the simplicity and ease of putting in the tunes and playing them back. For musical parents this is an ideal program for introducing a budding musician to the musical concepts of clefs, bar lines, note lengths, time signatures, etc. There are even several



pages of help notes for the 'musically unsure'.

KidsTime will keep nursery and infant school children interested and occupied over a long period especially if their parents take the trouble to use the facilities provided to fit the learning material to the specific needs of their children. KidsTime is available in the U.K. for £49.50 from MacSerious Software.

## From Usenet

From: phil@sivax.UUCP

Subject: Re: **Mac, Amiga**

I currently own BOTH machines, a Mac-Plus with AT-20 hard disk and an Amiga with 512K/ext disk drive. I have been using both for a couple of weeks now (The mac for 1 1/2 years) and thought I would give a comparison of sorts from a real users point of view:

1) The Amiga is full COLOUR! I do not care what anyone says, colour is great ...but...For any application, the MAC display is much better. I even connected a 9" b/w monitor to the Amiga (There is a video out as well as RF out and RGB out), the resolution is not at the Mac level. The display on the Mac 'feels' better. This is the best way to put it.

2) The AMIGA has graphics processing chips as well as custom voice synthesis and 4 voice circuits requiring very little processor time to use. It even comes out of the machine in STEREO (yes, right and left RCA jacks!).

There is no doubt that this allows the machine to do more.

The graphics and voice stuff is off-loaded from the 68000. But...Even with all its sophisticated H/W, I think the Mac Studio Session sounds better than the Amiga stuff (I used Instant Music for Amiga).

3) The Amiga is better at programmer interface things, such as, cleaning up windows. On the Mac, you must redraw sections overlaid by other windows. This is automatic (but overridable) on the Amiga.

4) AmigaDOS is very powerful. You get tired of window environment?, use AmigaDOS! The Amiga has the best of both worlds there. A workbench (Desktop) as well as a full DOS, complete with batch, MULTITASKING (with priorities, interjob communication, message mailboxes etc). You can spawn a job on the Amiga, and BOTH keep running. An example, you run Deluxe Paint (Macpaint-type program), it loads and is running, you take the mouse and click on the top menu bar and DRAG the mouse down. The screen moves down and the Workbench is right behind it!

(Ala like servant) But the difference is everything can still be running, a DOS window, Deluxe paint etc.

5) Mac disk management is better, keeping track of mounted but unloaded disks alot cleaner. The Amiga does too, but windows for disk mounts sometimes come up for disks in the drive. As well as requests for disks with GREEK names (Garbage names)

6) Mac disk drives are faster than the Amiga, I do not know why this is. The Amiga disks use a DMA xfer technique, so they should be faster.

7) Amiga comes with 1 serial port and 1 parallel port standard as well as a memory expansion port and a BUS EXPANSION PORT (ie for Sidecar, a FULL PC clone

waiting for, though it sounds very good. It's scheduled for release on October 31st and offers many features (condensed from their newsletter);

\* Operates in the background - no dedicated hardware required. Users without LaserServe do not lose printing capabilities. Works on Mac Plus, 512 and XL. Serves LaserWriter (and compatibles) and AppleTalk ImageWriters. Uses standard printer drivers. Works as a desk accessory. Has "direct print" and "priority service" options. Can use floppy, local hard disk or network server for spool files.

\* Up to 16 print jobs at a time with queue ordering and individual job control. Uses "pop-up" dialog messages; print

complete problem report and spools to multiple printers. Remembers configuration choices and auto-installs. Has a "fail-safe" design; print jobs saved on disk till completed.\*

If all these features work as stated, reliably, than maybe it is worth the \$125 but I would sure like to know beforehand. Has anyone seen any beta or prerelease versions that they can comment on?

Also, as that features list may sound like I'm promoting it or something, let me just say that neither I nor my employers are in any way, to the best of my knowledge, associated with Infosphere commercially or otherwise except that I personally am a satisfied customer of their MacServe and XLserve products.

I will be calling them a.s.a.p to get more info as this is a product that I really "have been waiting for" and will post a follow up on if there's enough interest and/or if I get lucky enough to actually see or use it soon. John VanMunster

## From Delphi

From: PIZZAMAN (13092)

Subject: **Medical Systems**

It is very hard for me to believe that someone hasn't put together a nice package for the medical office using Mac hardware and software. I have many medical compatriots who are finally ripe for a medical system for their offices, and they are all turning to IBM stuff. I find this hard to believe, since the Mac would be so much easier to use and valuable to

## NETWORK NEWS

complete with IBM PC -type card slots and other devices)

8) When a program finishes on the Amiga, the desktop does not have to be rebuilt as it runs as a process also, the forward windows are just removed. This is nice.

I hope this capsule comparison can help with any questions you might have, Phil Hunt

From: mlr0@bunny.UUCP

Subject: Re: **Inside Mac vol.IV**

> What is Inside Macintosh vol. IV???

It is the latest volume of Inside Macintosh and is specific to the Mac+. The ISBN # is 0-201-05409-4.

Martin Resnick

From: jmv@m@oakhill.UUCP

Subject: **LaserServe** from Infosphere

I just received a flyer in the mail from Infosphere promoting their soon to be released product LASERSERVE: "The Spooler You've Been Waiting For". At an SRP of \$125 per workstation, its probably not what a lot of us have 'been

these medical types. However, I must agree that no one yet has seemed to fill this void with a reliable accounting + billing + information managing system for them. Now, I have seen many mentions of medical systems on the networks and in print. However, I have contacted a number of them, and gotten nowhere. I have received a few very nice, three sided pamphlets, with what seemed sincere marketing hype, but so far have gotten nothing but smoke. One fellow even promised to send me a copy of his program to try. He was going to send it out the next day. That was a month ago. Sound familiar? What gives? Could it be that no one is really ready, yet, to fill this void? I have my Mac and HD-20 presently set up to do the creative work I need to do in my office. It word processes, keeps track of patients with MS file (granted a fairly simple approach), telecommunicates to the National Library of Medicine via BRS After Dark and Smartcom, and does all the graphics stuff I need to do to generate educational programs and papers. The only thing lacking is accounting to complete the package. How can I sell my friends on the Macintosh unless I can guide them to a decent package and support? What a shame if they all go with IBM's or clones. Is the problem that the market isn't big enough (I doubt that)? Anyone have any thoughts or ideas? These doctors want to try their wings on office computing, but think they have to go big Blue. They don't have the time or interest to piece meal their computing the way that I have. Barry

From: NANOCHIP (13465)  
Subject: RE: **Medical Systems**

There are some \*very\* interesting Mac Medical Office Systems listed in the Omnis Business Directory by Blyth Software (415) 571-0222. Of the 24 available Medical applications (covering Pharmacy, Veterinary Practice, Blood and Blood Donor Tracking Systems, Podiatry, Chiropractic & Dental) about 16 separate applications cover general Medical Office Management. Multiple user versions available for most of the listed products. All products developed with either Blyth Software's Omnis 3 or Omnis 3 Plus Chip

From: LAMG (13475)  
Subject: RE: **Medical Systems**

Actually, I think that there are a number of systems (notably Omnis III+) that already provide a sufficiently good way to write medical office management and

related software... someone's gotta DO it, though! Franklin

From: PIZZAMAN (13551)  
Subject: **Medical Systems**

I just wanted to say that I was looking for professional medical systems with support, not just some amateur templates for Omnis 3. Are these available? Thanks. Barry

### From Info-Mac

From: gould9!joel@nosc.ARPA  
Subject: **Merger mania takes out Hayden Books**

A friend of mine in the publishing industry told me yesterday that Hayden (including their computer book division) was purchased by MacMillan, the giant publishing conglomerate. MacMillan already owns SAMS and CUE. The book staff was sacked and the future of current projects is iffy. He suggested that the Hayden name and Apple Press aren't likely to survive. I haven't seen any mention of this in any computer magazine. Apparently most magazines (except for Byte) aren't aware that the computer book industry exists, although it doesn't stop some of their reporters from writing books.

Looking at my notes, someone at A-W had actually mentioned the Hayden purchase to me in July, but the significance didn't hit me then. However, looking at my bookshelf, I note that all 4 Mac books (2 by Chernicoff; Schmucker; and Knaster) are from Hayden.

If Apple Press leaves Hayden, Apple has been using Addison-Wesley for its separate "Apple Technical Library" series, including all the Apple II manuals, plus the four volumes of Inside Macintosh. Bantam Computer Books has already released the first of what the cover says will be a series on the Apple IIgs, so they are also on good terms with Apple.

There is a precedent for the SAMS/Hayden consolidation. In late 1984, Gulf & Western bought Prentice-Hall, and they already owned Simon & Schuster. The "creative" side of the book business sometimes gets a lot of latitude from the "financial" side, but after the S&S/P-H merger, the bean-counters swooped in with a vengeance and eliminated several competing computer book divisions within P-H. This included an entire 5-book Macintosh series, one of which was mine.

Joel West

From: mp1w@andrew.cmu.edu  
Subject: **PostScript**

Whenever I do a PostScript file dump (command-F after clicking OK in the print dialog), the resulting PostScript commands are in some sort of shorthand, obviously so that the LaserPrep file doesn't have to contain more than it needs to. Does anyone know if this compressed format is documented? I have the two PS books, and the reference manual says something about 'LaserWriter shorthand', but specifics are nowhere to be found. Any help is much appreciated. Marc

I note from moderator: The Laserprep file evidently defines many Macros so that the files which are sent to be printed can be smaller. To obtain the full postscript file sent to the laserwriter (including the prep file which contains these Macros) use the most recent Laserwriter driver file (v3.1) and hold down COMMAND-K instead of COMMAND-F. DAVEG ]

From: Mark Nodine  
Subject: **WP for Welsh?**

Apple did a pretty good job of trying to figure out which special characters would be needed by a broad variety of foreign languages when they developed the Macintosh fonts, so that the traditional vowels (a, e, i, o, u) can be accessed with a wide variety of different diacritical marks. Welsh uses more than those vowels commonly, specifically y and w. There are words in Welsh which have a circumflex (^) over y and w and which need the circumflex to distinguish them from other words. Does anybody know of a nice way to get these characters so I can do word processing for Welsh? I suppose I could edit all of my fonts that I want to use to add new characters, but then there will be the problem of figuring out the keyboard equivalents to invoke them... Can anybody help? Mark

### Credits

**Info-Mac** digests consist of submissions by individuals on the academic computer networks. Submission and distribution of these digests is by network, moderated by volunteers at Stanford University.

**Usenet** is a loosely-coupled network of co-operating academic and commercial computer systems. It is a non-profit network whose primary aim is the sharing of technical information and the spreading of research results.

**Delphi** is a commercial time-sharing and bulletin board system. The Delphi Digests are made available thanks to Jeffrey Shulman of Rutgers University. ♣

# FULLPAINT

from Ann Arbor Software

**A**nn Arbor Software's program retains the familiar MacPaint tools and functions, but adds some new tricks.

In the following comments, I have assumed that the reader is familiar with MacPaint and have concentrated my efforts on highlighting the more interesting additions incorporated in the FullPaint program.

The program is despatched from the U.S.A. unprotected and incorporates two useful utility programs LaserPrint and Color Print. The former allows you to split a picture file into either four or sixteen new files, which can then be edited in greater detail before printing (they can even be divided into more files, by using the facility again!). The ColorPrint program allows you to use the ImageWriterII with a coloured ribbon to produce multi-coloured pictures, by splitting the picture into its component parts and assigning a colour to each before saving as separate files.

To return to the main program, let us see what differences we can find. The tools and pattern palettes can be moved anywhere on the screen, or can be hidden from view to give more space for editing. Windows can be displayed with the usual menu and scroll bars visible, or either one (or both) can be hidden. It is now possible to have open up to four documents simultaneously, so you don't have to constantly close down before starting to edit a second file. The various documents can be displayed in 'stack' mode (one behind another, with the titles visible for ease of selection); or as four small tiles each taking a quarter of the screen. In either mode, clicking on any window will make it the active window.

The addition of rulers is a useful aid to

precision drawing. Measurements may be expressed in units of inches, centimetres, picas or pixels - whichever you find most appropriate to your task. Another aid to precision drawing is the MouseSpot facility, which shows the exact location of the cursor in relation to the upper left-hand corner of the picture, and the dimensions of the object being drawn - I have to admit that I found this confusing rather than helpful, but I am not a draughtsman and this is not a concept with which I am familiar. The MouseCrawl facility was one which I found much easier to use, and did help me to ensure accuracy in my drawings by allowing the mouse movement to be slowed right down to a single pixel movement.

Printing also reveals some new choices. You can choose between the printing of a full page, or just a portion of it. Two qualities of print are available - draft or final. You can also adjust the size of the printout to be produced. On the ImageWriter, the choice is limited to just four options - 50%, 100%, 200%, 400%. However, if you are printing to the LaserWriter, you can type in any size you want within the range of 25% to 400%. If necessary, the program will automatically split the picture between several pages prior to printing. This differs from using the LaserPrint utility I mentioned earlier, in that the latter creates several permanent files which can be separately edited.

If you simply wish to print a

desktop, simply select one or more files to be printed and choose 'Print' from the File menu.

There are some useful features for manipulating images that have been selected with either the Marquee or Lasso tools. As well as being able to flip, invert, rotate; there are new options for free rotation (in one degree increments), skew, distort, and per-

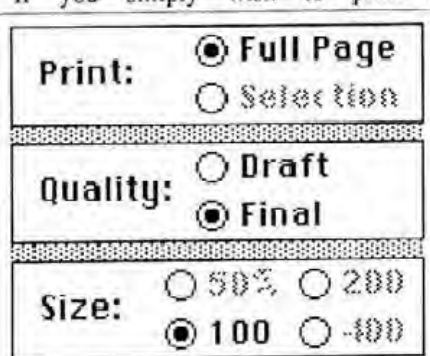
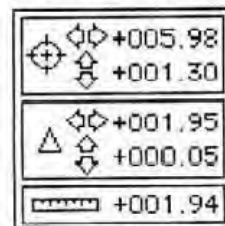
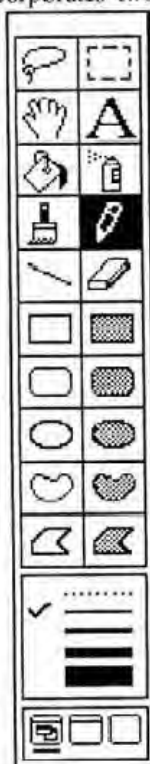
spective to give special effects in your pictures, and selected images can be stretched or shrunk in a variety of ways!

MacPaint allows the editing of patterns, and this is still available in FullPaint. You are also able to edit any of the 32 standard brush shapes, opening up a new realm of interesting effects. As you would expect from a program written for the Macintosh, there are many shortcuts available to you, once you have mastered the basic techniques. These incorporate the familiar double-(or even triple-)click on tools, and the option, command, and shift keys. These soon become second nature, but if you should accidentally double-click the eraser instead of the pencil (as I have done) do not despair - our old friend 'UNDO' is there in the Edit menu to rescue you from disaster!

In writing this review, I make no apologies for comparing FullPaint with the old favourite MacPaint. The latter is so familiar to Macintosh users that it seems superfluous to dwell on the facilities afforded. It is a very useful program - well ahead of its time, when first introduced - and it seems to have been used as a sound base for the newer FullPaint. The added features make the latter an attractive program, without causing significant retraining for the experienced MacPainter.

All-in-all, FullPaint provides many advantages over MacPaint, without losing any of its essential features.

Ann Arbor Softworks Inc., 308 1/2 S. State St. Ann Arbor, MI 48105



document, and know the file name, you need not actually open the file (which is an obvious time-saver). From the

## ULTRAPLAN

by Nick Hunter

Ultraplant<sup>TM</sup> for Macintosh consists of a series of templates for financial planning. This excellent time saver should find widespread use in both small and large businesses. It comes on two disks each of which are used with Multiplan<sup>TM</sup> on a minimum 128k Mac with external disc drive. The two disks provide a comprehensive Budget as well as a wide range of Management Aids. These operate as templates which run through either Multiplan or Excel<sup>TM</sup>.

The main body of the Budget Module includes nineteen schedules which will likely be used by every type of business. The totals from these Preparatory Schedules are consolidated in a series of Final (Presentation) Schedules which present accounting information in its usual time-honoured ways:

- . Profit and Loss Account.
- . Taxation Account.
- . Balance Sheet.
- . Financial Charges and other income.
- . Partners Current and Capital Accounts.

A selection of these final schedules is made depending on the type of business - Limited Company, Partnership or Sole Trader.

The relationships between the Preparatory and Presentation schedules are clearly explained in three flowcharts which show how totals are aggregated and find expression on any dependent sheet.

Preparatory schedules can be run by opening and immediately saving them to ensure any information required is then passed on to dependent ones. In some cases schedules should be run at least twice in order that the Results and Interest charges are fed back into the relevant Profit and Loss accounts and Balance Sheets etc. The package has a facility for carrying balances through from prior years including Stock, Debtors, Creditors and Profit and Loss Account. One nice feature to see is that all amounts are shown in Pounds Sterling - a rare pleasure when so much software these days comes from overseas.

Ultraplant is not an accounting package which can be expected to cover every financial aspect of running a business. As every business is different, those which have a heavy burden of Stock-in-hand would utilise the Stock-Profit Optimisation and Reorder Level calculation aids, while other business which are labour-intensive would use the Direct Labour Cost facility.



This package will be invaluable to anybody consolidating Company Accounts - or running a check on their financial advisor. The business models are well chosen and are certainly more comprehensive than any other individual template that I have seen to date. The use of accounting jargon is kept to a minimum which makes the package easy to use even by the inexperienced. To really master this package it might take a full day to find and enter all the summary information on your Company. But once this is done, it is done for good and the vital information you always need is there at your fingertips.

Ultraplant is elegant because it needs very little training to use. Trinity Business Systems offer a Hotline service to help the user if any difficulties should arise or if changes to the budget model or schedules formats are wanted. The manual is the standard (US) format of 7.5 by 9 inches but most of the text is printed sideways so that the wider spreadsheet columns can be printed as one. I would have preferred the text not printed sideways as this hampers speed of ease on a cluttered desk. Also it has no proper index and could benefit from better labelling to make it quicker to use.

These are trivial criticisms though, for Ultraplant succeeds admirably in its function of saving business time. At a price of £99.00, it should pay for itself quickly in better business controls.

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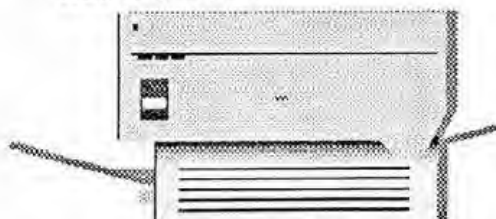
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Macintosh Plus



LaserWriter

An Apple LaserWriter printer was used to produce the artwork for this ad. using a BIT 32 DTP Workstation. Laserwriters can be shared by up to 31 Macintosh computers.

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Headstart Workstations are already in use in ordinary schools to help disabled students study for exams, at specialist disabled colleges, in hospital occupational therapy departments and by a growing number of disabled individuals for whom the Macintosh is the only outlet for expressive and creative abilities. Users include people with tetraplegic and paraplegic spinal injuries, (for the spinal injury literate, one user suffered a 'C2 Complete' lesion), palsy, locked muscle syndrome and various other severe disabilities. Because every disabled person has unique problems, each Workstation is individually tailored to the user's needs.

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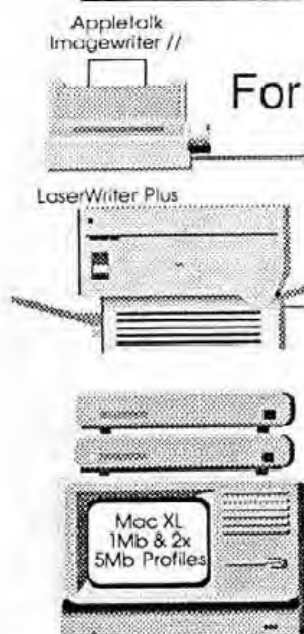
By special arrangement with Apple Computer (UK) Ltd, we are able to offer discounts of 25% off all Apple manufactured components, where the system is for exclusive use by one disabled individual, and any VAT exemptions also apply. Where a HeadStart Workstation can be used to give a disabled person employment, including homeworkers and the self employed, funding may be available for the entire workstation through the Manpower Services Commission, and we can put prospective employees and employers in touch with the necessary departments to help speed the process up.

The cost of BIT 32 HeadStart Workstations varies from around £2500 to £5500 (excl. VAT) depending on the individual's particular needs, so we will be happy to provide further detailed information and cost estimates on a personal basis.

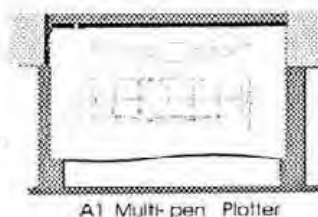
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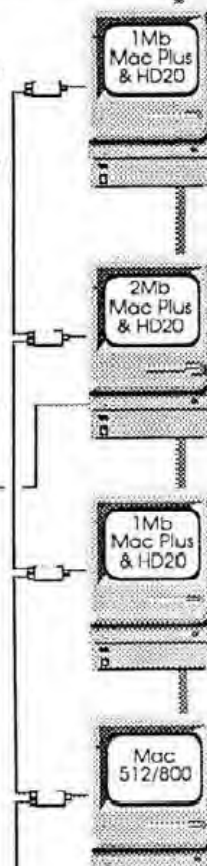


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\*Computer Aided Design on the Macintosh Hastings, G. Prentice 400p. Reston 02/1986 pap. text ed. \$24.95 ISBN: 0-8359-0992-1

\*Graphics for the Macintosh: An Idea Book Grillo, John P.; Robertson, J. Douglas HR&W 1985 Trade \$17.95 ISBN: 0-03-000477-2

\*Power Painting: Computer Graphics on the Macintosh Bauman, Verne; Kidd, Ronald; Vaccaro, Gaspar-Illustrator Orig. Ed. 224p. Bantam 10/1985 pap. \$16.95 ISBN: 0-553-34215-0

\*Macintosh Graphics: A Reference Encyclopedia for MacPaint, MacDraw & Graphic Systems in Microsoft Basic & Macintosh Pascal Smith, Leslie; Cummings, Brian Plume NAL 10/1985 pap. \$16.95 ISBN: 0-452-25563-5

\*Becoming a MacArtist Guzelimian, Vahe; Compute!-Editor Orig. Ed. 312p. Compute Pubns 01/1985 pap. \$17.95 ISBN: 0-942386-80-9

\*MacPack: Creative Activities with MacPaint & MacWrite Softsync Inc. Staff; Aker, Sharon 350p. Ashton-Tate Pub 01/1985 pap. \$15.95 ISBN: 0-912677-42-2

### Programming in C

\*Programming in C for the Macintosh Kochan, Stephen G. 356p. Hayden 12/1986 Trade \$24.95 ISBN: 0-8104-6566-3

\*Programming the Macintosh in C Cummings, Bryan J.; Pollack, Lawrence J. Orig. Ed. 325p. Sybex 12/1985 pap. \$18.95 ISBN: 0-89588-328-7

\*Using the Macintosh Toolbox with C Huxham, Fred A.; Burnard, David; Takatsuka, Jim Orig. Ed. 559p. Sybex 11/1985 pap. \$22.95 ISBN: 0-89588-249-3

\*Programming C on the Macintosh Ward, Terry A. 384p. Scott F 11/1985 pap. \$19.95 ISBN: 0-673-18274-6

\*C Programming Techniques for Macintosh Schilke; Medneiks 300p. Sams 08/1986 Order No.: 22461 pap. \$18.95 ISBN: 0-672-22461-5

### Pascal on the Macintosh

\*Macintosh Pascal Carmony, Lowell A.; Holliday, Robert L. Series: Computers & Math Ser. 495p. Computer Sci 1985 pap. \$22.95; \$20.00 student's diskette; \$20.00 solutions diskette ISBN: 0-88175-081-6; 0-88175-088-3; 0-88175-089-1

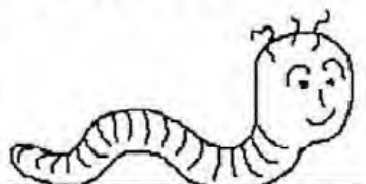
\*Pascal Primer for the Macintosh Shafer, Dan Plume 1985 pap. \$19.95 ISBN: 0-452-25640-2

\*Macintosh Revealed, Vol. II: Programming with the Toolbox Chernicoff, Stephen 544p. Hayden 1985 Trade \$29.95 ISBN: 0-8104-6561-2

\*Learning Macintosh Pascal: A Programmer's Guide Wikert, Joseph B.; Davis, Sam 356p. Scott F 03/1986 pap. \$19.95 ISBN: 0-673-18333-5

### On the

## BOOKSHELF



### for the Macintosh Bookworm

## The Business Macintosh

\*Mac at Work: Macintosh Windows on Business Venit, S.; Burns, Diane 228p. Wiley 03/1985 pap. \$17.95; \$39.95 Book with program disk ISBN: 0-471-82050-4; 0-471-82737-1

\*Jazz on the Macintosh Caggiano, Joseph; McCarthy, Michael 300p. SYBEX 06/1985 pap. \$22.95 ISBN: 0-89588-265-5

\*Multiplan Made Easy Ettlin, Walter A. Orig. Ed. 209p. Osborne-McGraw Trade \$14.95 ISBN: 0-07-881135-X

\*Microsoft Multiplan: Of Mice & Menus: Models for Managing Your Business with the Apple Macintosh The, Waite Group; Waite, Mitchell; Bono, Bill; Kalkis, Ken 344p. Microsoft 06/1985 pap. \$16.95 ISBN: 0-914845-33-0

\*Microsoft Word Made Easy Hoffman, Paul Orig. Ed. 250p. Osborne-McGraw pap. \$15.95 ISBN: 0-07-881144-9

\*Swing with Jazz: Lotus Jazz for the Macintosh McCarty, S. Michael 400p. Bantam 10/1985 pap. \$18.95 ISBN: 0-553-34230-4

\*Controlling Your Cash Flow With Jazz & The Macintosh Glau, Gregory R. 230p. Dow Jones-Irwin 03/1986 pap. \$22.00 ISBN: 0-87094-703-6

\*Command Performance: Multiplan on the Apple Macintosh Adamis, Eddie Series: Command Performance Ser. Orig. Ed. 334p. Microsoft 12/1985 pap. \$19.95 ISBN: 0-914845-58-6

\*Managing Your Office with Macintosh Good, Phillip I.; Good, Kathryn Orig. Ed. 165p. Chilton 07/1985 pap. \$16.95 ISBN: 0-8019-7543-3

\*Introducing the Macintosh Office Thompson, Keith Ashton-Tate Pub 1985 pap. \$19.95 ISBN: 0-912677-58-9

### Assembler

\*Assembly Language for the Macintosh Harrington, Jan HoltC 496p. HR&W 1986 pap. text ed. \$26.96 ISBN: 0-03-000833-6

\*Programming the Macintosh in Assembly Language Williams, Steve Orig. Ed. 779p. Sybex 11/1985 pap. \$24.95 ISBN: 0-89588-263-9

\*Macintosh TM Assembly Language Programming Commander, Jake 208p. TAB Bks 09/1985 Order No.: 2611 Trade \$24.95; pap. \$16.95 ISBN: 0-8306-0411-1; 0-8306-0311-5

\*Complete Book of Macintosh Assembly Language Programming Weston, Dan Scott F 06/1986 pap. \$25.95 ISBN: 0-673-18379-3

\*Advanced Techniques in Macintosh Assembly Language Programming Weston, Dan Scott F 10/1986 pap. \$22.95 ISBN: 0-673-18583-4

### General Programming

\*Macintosh LOGO Haigh, Roger W.; Radford, Loren E. 272p. Wiley 05/1986 pap. \$18.95 ISBN: 0-471-81732-5

\*Artificial Intelligence: Programming on the Macintosh Shafer, Dan; The, Waite Group 380p. Sams 02/1986 Order No.: 22447 Trade \$24.95 ISBN: 0-672-22447-X

\*Programming the Macintosh User Interface Simpson, H. K. 256p. McGraw 07/1986 ISBN: 0-07-057320-4

## Desktop Publishing

\*Macintosh Desktop Publishing  
Baxter, John Orig. Ed. Baxter Group  
12/1986 pap. \$24.95 ISBN: 0-938949-00-4

\*Macintosh Desktop Typography:  
First in a Series on Macintosh Desktop  
Publishing Baxter, John Orig. Ed.  
Baxter Group 07/1986 pap. \$12.95  
ISBN: 0-938949-01-2

\*Macintosh Desktop Design:  
Second in a Series on Macintosh  
Desktop Publishing Baxter, John  
Orig. Ed. Baxter Group 09/1986 pap.  
\$12.95 ISBN: 0-938949-02-0

\*Macintosh Desktop Production:  
Third in a Series on Macintosh Desktop  
Publishing Baxter, John Orig. Ed.  
Baxter Group 11/1986 pap. \$12.95  
ISBN: 0-938949-03-9

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\*Book of Macintosh Software  
McCroskey, Mellin, Ritz, Editors  
535p. Arrays-Continent 08/1985  
pap. \$19.95 ISBN: 0-912003-20-0

\*Approaching Macintosh Tchao,  
Michael 356p. Addison-Wesley  
04/1986 pap. text ed. \$25.70x ISBN:  
0-201-16496-5

\*The Joy of Macintosh: Recipes for  
Using Your Mac Productively Green,  
Kenneth C.; Van Dam, Rika Scott F  
ISBN: 0-673-18329-7

\*The Easy Guide to Your Macintosh  
Caggiano, Joseph 280p. SYBEX  
07/1984 pap. \$14.95 ISBN: 0-89588-  
216-7

\*Ken Uston's Illustrated Guide to the  
Macintosh Uston, Ken Series:  
Illustrated Guides Ser. P-H 10/1984  
Trade \$9.95 ISBN: 0-13-514829-4

\*Macintosh: The Appliance of the  
Future Lewis, Gerard 288p. Banbury  
Bks 07/1984 pap. \$14.95 ISBN: 0-  
88693-031-6

\*The Apple Macintosh Book Lu,  
Cary 2nd ed. 448p. Microsoft  
11/1985 pap. \$19.95 ISBN: 0-914845-  
66-7

## For those who like BASIC

\*BASIC for the Macintosh: A Self-Teaching Guide Finkel, Leroy; Brown,  
Jerald R. Wiley 07/1986 pap. \$16.95 ISBN: 0-471-81152-1 \*Macintosh  
Programming Using MS-BASIC 2.0 Vile, Richard C., Jr. Orig. Ed. 288p.  
Tab Bks 01/1986 Order No.: 2621 Trade \$24.95; pap. \$16.95 ISBN: 0-  
8306-0321-2; 0-8306-0221-6

\*The Macintosh Basic Handbook Blackadar, Thomas; Kamin, Jonathan  
864p. SYBEX 01/1985 pap. \$24.95 ISBN: 0-89588-257-4

\*Creative Programming in Microsoft BASIC for Optimal Macintosh  
Performance Lambert, Steve 560p. Microsoft 12/1985 pap. \$18.95  
ISBN: 0-914845-57-8

\*Programming Macintosh BASIC DiElsie; Grossman; Tucciarone 350p.  
Burgess MN Intl 1986 pap. text ed. write for info. ISBN: 0-8087-6404-7

\*Apple Macintosh Business Software in BASIC Weber Systems Staff  
300p. Weber Systems 03/1986 pap. cancelled; Trade \$20.00 incl. disk  
ISBN: 0-938862-20-0; 0-938862-21-9

\*Short, Simple, & BASIC: Fifty-Nine Business Programs on the  
Macintosh for the Smart Manager Robinson, Mark; Kepner, Terry 320p.  
Scott F 02/1986 pap. \$18.95 ISBN: 0-673-18284-3

\*Macintosh BASIC: A Beginner's Guide to Structured Programming Stat,  
Robert W. 280p. Banbury Bks 02/1985 pap. \$14.95 ISBN: 0-88693-164-9

\*Advanced Macintosh BASIC Programming Calippe, Philip Orig. Ed.  
Compute Pubns 11/1985 pap. \$16.95 ISBN: 0-87455-030-0

\*Microsoft Macinations: An Introduction to Microsoft BASIC for the Apple  
Macintosh The Waite Group; Waite, Mitchell; Lafore, Robert 528p.  
Microsoft 10/1985 pap. \$19.95 ISBN: 0-914845-34-9

\*Programming in Macintosh BASIC Heid, James Ashton-Tate Pub  
05/1985 pap. \$24.95 ISBN: 0-912677-48-1

\*Using Your Macintosh: Beginning Microsoft BASIC & Applications  
Swadley, Richard K.; Wikert, Joseph B. Orig. Ed. Compute Pubns 10/1985  
pap. \$16.95 ISBN: 0-87455-021-1

## For the Specialist

\*The Macintosh Hacker's Bible  
Clapp, Doug Scott F 10/1986 pap.  
\$24.95 ISBN: 0-673-18525-7

\*Zen & the Art of the Macintosh  
Green, Michael Running Pr 09/1986  
Lib. Bdg price not set; pap. \$19.95  
ISBN: 0-89471-348-5

\*MacAlgebra: BASIC Algebra on the  
Macintosh Marcus, Marvin; Marcus,  
Rebecca; Baczynski, Catherine Series:  
Computers & Math Ser. 427p.  
Computer Sci 01/1986 pap. text ed.  
\$24.95; \$20.00 student's disk; \$20.00  
tchr's. disk ISBN: 0-88175-135-9; 0-  
88175-136-7; 0-88175-138-3

\*Music & Sound for the Macintosh  
Behrendt, Bill L. 200p. P-H 07/1985  
pap. \$15.95 ISBN: 0-13-607185-6

\*Conquering the Macintosh  
Kingdom: Twenty-Five Original Games  
in Dazzling Sight & Sound Behrendt,  
Bill L. 200p. P-H 09/1985 pap.  
\$15.95 ISBN: 0-13-167974-0

\*MacTalk: Telecomputing on the  
Macintosh Leemon, Sheldon; Levitan,  
Arlan; Compute!-Editor Orig. Ed.  
263p. Compute Pubns 02/1985 pap.  
\$14.95 ISBN: 0-942386-85-X

\*Macintosh Expansion Guide  
Phillips, Gary Orig. Ed. 320p. Tab  
Bks 01/1986 Trade \$22.95; pap. \$16.95  
ISBN: 0-8306-0401-4; 0-8306-0301-8

\*Macintosh for College Students  
Pfaffenberger, Bryan 241p. SYBEX  
10/1984 \$14.95 ISBN: 0-89588-227-2

\*The Serious Macintosh: Tips,  
Tricks, & Advice for Advanced Users  
Harriman, Cynthia; Calica, Benicon  
Hayden Date not set

\*Lon Poole's Mac Insights: Secrets,  
Shortcuts, & Solutions for the Apple  
Macintosh Poole, Lon Orig. Ed.  
352p. Microsoft 08/1986 Trade  
\$18.95 ISBN: 0-914845-73-X

\*Chilton's Guide to Macintosh Repair  
& Maintenance William, Gene B.  
224p. Chilton 04/1986 pap. \$12.50  
ISBN: 0-8019-7639-1

\*PC to Mac & Back: A File  
Transfer Utility for the IBM-PC &  
Macintosh Mackie, Peter H.; Griffin,  
John R. 165p. Dilithium Pr Trade  
\$149.95 inc. disk ISBN: 0-88056-224-2

\*IBM or MAC: The Choice Is Yours  
Todd, Clayton; Wade, Howard Orig.  
Ed. 240p. Oregon Pr 05/1986 pap.  
\$14.95 ISBN: 0-936667-07-9



# OCCUPATIONAL HEALTH AND SAFETY

## *Open Learning Project*

Our project is producing self study material for professional occupational hygienists and safety advisors. It is based in three centres - Central Manchester College, Health and Safety Technology and Management Ltd (based in Birmingham) and Portsmouth Polytechnic. We are using the Macintosh for every aspect of our operations.

### Communications

This is perhaps the most important operational constraint we have because of our three widespread centres. Each centre is responsible for a different stage of the work, as it progresses from ideas to finished product. So we have to pass on work we have completed to another centre for its next stage. And it makes life easier for us if all the operations can be done electronically without continually shunting pieces of paper up and down between our three centres. For example a script can be received in Birmingham and wordprocessed into the Macintosh. It is then sent as a MacBinary file to Portsmouth where it is edited - on the Macintosh again. Finally it is transferred to Manchester for the addition of graphics and page layout - on the Macintosh again.

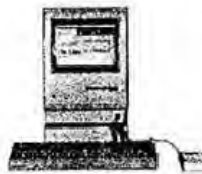
Each centre has a modem and communications software and we use One to One electronic mail for our internal communications. We think that our material will have world-wide application so the use of electronic communications in our project will grow very rapidly.



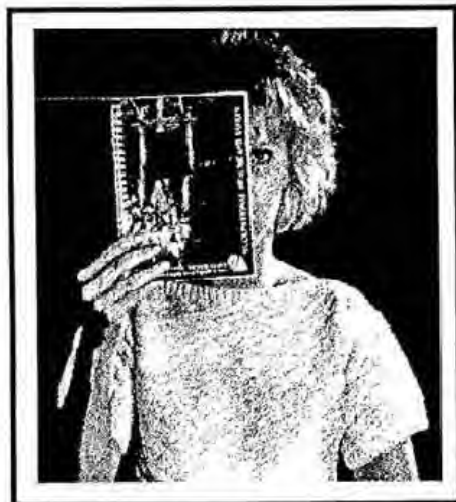
Manchester



Birmingham



Portsmouth



### Publishing

This is the most important area of work at the present time.

We are committed to producing 43 books covering those areas of occupational health and safety for which knowledge and advice is most needed. Each of these books contains about 100 pages and they are A5 in format. They are profusely illustrated with diagrams and tables.

We use PageMaker for the layouts and print the resulting documents on a LaserWriter Plus. The hard copy is used as camera ready copy for offset printing.

The decision to use A5 format caused us some headaches at first - there's no A5 page set up in Pagemaker! So we use an A4 page in landscape mode and use the Columns option to divide up the page. This gives us mind bending calculations as far as pagination is concerned. And it got worse when we decided we would like to make mock-ups of our books on the LaserWriter. For each book we have two documents - one which prints one side of the paper and one which prints the other. So working out on screen where the next page should be laid out and into which document it should go was a major task. But like all major tasks, now we have got our system sorted out our complicated pagination has become quite easy to use.

### Administration

The same geographical constraints apply to the administration of our project. We all use the same programs and documents so that records, letters and information can quickly and electronically be passed round the three centres.

We use Jazz for these documents because it is simple to use, its capacity is sufficient for our needs and its mail merging facilities are wonderful! Even its wordprocessing facilities are better than MacWrite - having two or more wordprocessing windows open at once is a must when editing texts. We have very little administrative support so we have to make the administrative side of our operation as fast and easy to use as possible. Improvements to Jazz I would like are

- recognition of its wordprocessing by PageMaker
- ability to do a limited amount of relational database work.

Unfortunately I get the distinct impression that Lotus are not supporting this program as well as they could.

We keep one master database of potential customers. Our other centres are kept updated on new contacts by postings in the electronic mailboxes.

David Wardell is a Senior Lecturer at Central Manchester College and is the North Regional Manager of the project with responsibility for the production of the open learning material.

Mary Johnston is the Graphic Designer who actually does all the work!

They can be contacted on 061-834 5051

The diagrams are produced in MacDraw, and both Word and MacWrite are used for the wordprocessing and editing. We avoid MacPaint like the plague because of its resolution on the LaserWriter. We tried Superpaint at the Apple World exhibition but the beta test version was disappointing. You can change the Macpaint resolution into 300dpi laser resolution and even save the resulting file in PICT format. But when this file is placed in PageMaker it seems to come out squashed vertically. We have tried the beta version of Cricket Draw and this looks like the best replacement for MacDraw.

We have used MacDraft Ver 1.1 but frankly found it disappointing. It does not have enough compatibility with MacDraw and PageMaker. If you paste pictures from MacDraft to MacDraw line thicknesses change, arrows disappear and text sometimes gets screwed up. You can't save the document of our version of MacDraft as a PICT image so it can't be recognised by PageMaker. I hear you can save the upgrade versions of the program in PICT format, so I'll have to get on to my dealer and try it out.

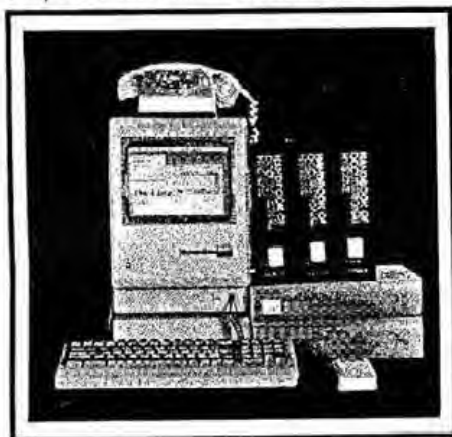
To be of any use to us, Mac programmes have to be like a hierarchical file structure. Pagemaker is at the desktop and all other programmes have to be compatible with it.

We have produced Thunderscanned pictures and they are only just acceptable. Even to get this acceptability we have to scan the originals at 400% and then reduce them in MacDraw or PageMaker. Pasting them into MacDraw sometimes involves cutting and pasting the resulting huge ThunderScan images in four or five operations. The largest ThunderScan document we have created is 1200k - too big to fit on a floppy! The new Microtek scanner will give us acceptable resolution and even at £2100 it is a sorely tempting buy.

The best thing about the whole desk-top publishing operation is the ability to make last minute changes and instant updates to our material. Ease of change makes it possible for us to have short print runs - these are usually only 50 copies. The trouble is that the editor and writers have also realised that we can edit on page and are constantly asking for corrections and improvements. Sometimes I think we spend more time improving what we have done than creating new material! Perhaps the new technology allows editors and writers to become more sloppy in the finished presentation of their part of the work. Like other aspects of computer technology it allows the user to make more choices - and also gives you more time to make those choices. I can translate this as an unwillingness to make decisions.

### On-line Open Learning

None of the members of the project had much experience of computers until they were introduced to the Macintosh. Since then we have come a long way. So much so that we are actively pursuing the idea of creating a bulletin board system for on-line help, tutorial and counselling advice for our customers. We could even put the raw text of our published material on the board.



method they choose to give this support. Electronic mail is an obvious answer to the problem. Assignments can be marked, problems can be publicly aired and tutors can keep in close contacts with students.

There are several advantages for an open learning system in doing this. Many health and safety professionals are only interested in getting hold of information to solve one particular problem so they do not want to buy a whole book to find the answers. They will be able to download as little or as much of our texts as they need.

Open Learning is a very lonely business and students need all the support they can get to make up for the lack of meeting their peers in a classroom. Most Open Learning projects agonise over the

### The lessons of the system

The Macintosh desk-top publishing system gives a great amount of flexibility. There are three key points

- It gives a great amount of flexibility in customising and modifying printed material
- It allows a publisher the indulgence of very small print runs
- Traditional publishing working methods go out of the window and a new logistical 'who does what, when and in what order' has to be established.

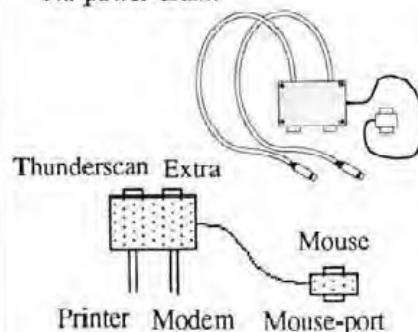
We are still learning this last lesson. The quantum leap for us is that we are trying to do it at a distance as well!

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# 48 NEW MAC LIBRARY DISKS!

## Telecommunications

Disks 73 to 75 contain new and updated telecommunications programs.

73 contains **MacTex** which is a videotex (viewdata) communications application. It has help and documentation and originated in Switzerland. It has no connection with the Tex word processing program.

74 contains **PackitIII**, which lets you send several files packed as one large one. **VMCO** allows visual monitoring (by icons) when in on-line conferences, **MScan 2.1** and other small items.

75 has the latest **Kermit**, **File Stripper 2.1**, **FModem 0.95d** with documentation, etc.

## Fonts

Disks 76 to 78 contain a varied selection of Fonts.

76 is a disk from Australia containing fonts, keyboards and layouts. **Bangkok**, **Devanagari**, **Saigon** and **ANUMath Keyboards** are included as well as **FontKeys** and **FontKey Instructions**.

77 contains the **BostonII** fonts with the full manual. These fonts were developed at Boston University and the manual is very thorough.

78 contains **Braille** fonts with information. Several other fonts are included; **Algebra**, **Chicago 14-24**, **Giants 18**, **Japanese**, **Milan 24**, etc.

## Desk Accessories

Disks 79 and 80 contain Desk Accessories.

79 contains 33 files. The main item is the **MacInHebrew DA and Fonts** with Instructions. Other files are **Labelv1.0**, **Reader 1.06**, **ToggleKeys.6**, **Artisto** with docs, **ClipEdit 1.2**, **New Scrapbook DA** and many others.

80 contains 43 files. **HFS.SetFileDA**,

**MenuSelect2.0FKey**, **Other 2.01**, **FolderMaker1.0**, **Checksum**, **QDial1.5** with docs, **TimerDA**, **Tab Expander DA**, etc.

## Medical

Disks 81 to 84 are four disks of anatomical and physiological files.

81 contains 27 files covering the **Avian Respiratory System**, **Embryonic Development**, **Fish Respiratory System**, and some digitized anatomical pictures.

82 contains 25 files of medical and anatomical Filevision databases. The main folders are labelled **Ruminant**, **Large Intestine**, **Equine**, **ECG**, and **Nn.spinal**.

83 contains 21 files of anatomical and physiological databases. The main folders are **Calcium** (8 files on calcium transport across membranes), **Pectoral ap.** (10 files), and other Filevision documents on **Canine Skeleton** and **exch. ves.**

84 contains 23 Filevision documents on the **Alimentary Tract**, **Nutrition and Metabolism**. The main folders are labelled as follows:- **Pregastric**; **Gastric**; **Nutrient Digestion**; **Nutrition and Metabolism**; **Sm.Int.-Liver-Pan.**

## Languages/Programming

Disks 85 to 91 cover a variety of languages and programming tools.

85 is a **MacMETH 1.0 Demo (Modula-2)**. Besides **MacMETH** itself, it contains the **Edit**, **Compile**, **Link** and **Debug** files plus 27 other files.

86 contains **FKey Installer**, **Manual and Notes**, and **Extras FKey**; also **TMLskel**, **McBug**, **Inside Switcher**, **IconMaker**, etc.

87 and 88 both contain **Rascal programs with full source code**. On 87 the main programs are **Factor**, **Goliath**, and **Harmonics**, and on 88 there are **BestFit**, **FFT**, **MandelTour**,

**Planimeter**, **Signal**, **StopWatch** among others.

89 has **Pathname FKey**, **Super Spool3.0d**, **Cat.Mac**, **FastPrint**, **Sizer 1.0**, **Print Queue 3.0d**, **CrashGuard** plus docs, **Updater**, **SuperParker™** docs, **SCSI Format&Install**, etc.

90 contains **XLISP 1.6** with **Directions** and docs, also **Tiny Prolog.lsp**, **Object Oriented.lsp**, **Factorial.lsp** etc.

91 has a **BASIC Assembler and Macro Modeller**. It also contains **Macintosh Basic** (a version released on the AUC disks) with example programs, and a program to control a **Perkin Elmer Lambda 9 spectrometer** from a Mac.

## Simulation

Disk 92 is a system disk which when booted runs through a simulation of a **Small Laboratory Computer System**, ie a **DEC PDP-8**. It is done by a complete guided tour with a **MacinTalk** commentary. It allows you to run a simulation of a **PDP-8**, write assembly language programs for it and execute them step by step.

## Graphics

Disks 93 to 98 contain graphics applications, pictures and associated files.

93 contains 13 **MacPaint** pictures with a viewing program. The pictures are **Amitok**, **Balron**, **Cheetah**, **Cognitive**, **Conan**, **Coyote**, **Grey Otter**, **Hands**, **Meryl**, **Minotaur**, **Planet**, **Surprise**, **Utukku**.

94 contains many **Robotech MacPaint** pics, plus a **Woz in Australia** slideshow.

95 contains **Small Graphics Applications**; **Rays**, **Spinning Ball**, **Spiro**, **PatternAide**, **Flex**, etc.

96 has **3D Sketchx 128K** and **3D Sketchx 512K** together with **MacGrapher**, **Mirror Balls**, **PadDesign**, **ScrollPaint** etc.

97 contains a **MacMotion** demo, **Rotate Paint**, **DrawPaint**, **String Art**, etc.

98 has **3D-Edit** with example files, **Blob Manager** demo, **Pattern Librarian**, **Point Symmetry** demo, etc.

## Mandelbrot

Disks 99, 100, 101 and 102 contain **Mandelbrot data** files and are for use with **MacSig** disk 39 **The Mandelbrot Set**.

99 contains **MandelTour**, **Medium Eye**, **Vectrix Top Dot** and **MandelTour.src**.

100 contains Full Mac Mandelbrot and Vectrix Spiral (both very large files).

101 contains Right valley, Three Arms and Top Valley.

102 contains Arm and Vetrix Island (again very large files).

### Australian AUC

Disks 103 to 105 were produced by the Australian University Consortium.

103 contains ANUGraph, a general purpose 2D function plotter; MacSTRAN, structural analysis for civil and structural engineers; also Time Plot and Fourier transform.

104 needs AppleTalk; contains MasterNode, Graphmatcher, getdata and Peek which can be used to watch the process of the graph matching exercise.

105 both shows you and tells you (with the help of MacinTalk) how to use the ScreenPlay and Replay programs to create your own demos (or guided tours). Demos can include graphics, speech and text.

### Demos

Disks 106 and 107 are demonstration disks.

106 is a complete demo disk of

dMacIII. It contains the full implementation of features but the number of records is limited.

107 contains an animated dictionary of the German Sign Language for the deaf. The examples were created with VideoWorks but do not need it to run.

### Games

Disks 108 to 113 contain games.

108 is a Wizardry Demo Disk.

109 has Wave 15! containing in addition Silicon ValleyBall, MacPoly demo, MasterGuess, Black Hole, etc.

110 is a complete disk containing the adventure Radical Castle.

111 contains SpaceBubbles, Window Blaster, Solitaire, MacTrivia, MacSeven, Mac Concentration, Geography, Connect Four

112 contains OfficeAttack™, Killer Kalah, MacMatch, Daleks+, Megaroids+, etc.

113 has Mystery Box, Tablut, Klondike2.1, Ars Magna™, Star Trek Trivia, etc.

### Sound and Music

Disk 114 contains The Talking

Eliza application, together with SpeakEasy and La Limerick Machine.

Disk 115 is mostly Speech and Music, with Talking Moose, Speak and many song and instrument files.

### WP and Utilities


Disks 116 to 120 contain mainly word processing and other utilities.

116 contains many Word Processing Utilities and also SmallTalk and MiniAda.

117 is Bacchus Greek; Word Processing in Ancient and Modern Greek.

118 contains Printer Utilities and a Calendar program; Page Setup Customizer 2.0 with info, yapu 3.0 with docs, WordStar to MacWrite with docs etc

119 also contains a WordStar->MacWrite utility, File Tricks, Mailing Labels 1.0, Ramdisks, Inventory, Mortgages, etc.

120 contains Backup and Document Utilities; Fast Formatter 2.1, Hardsave, MacDump, Version Reader 1.1, The Front Man, etc. 

The Cast of  
Macross  
from  
Disk 94



# Dealer Profiles of the Month

## Computer City

Owen and Doris Hargeaves first became interested in the Apple II when they bought one to help in the running of their screen-printing business. They recognised the potential of the home computer market some years ago, and opened a retail outlet in Widnes. It was a natural progression to concentrate on Apple systems and address the business market in addition to the more serious home computer user.

Since that decision, they have converted a part of the Widnes premises into a training room, so that training courses and seminars can be hosted in comfort. A second showroom has been opened in Liverpool - right at the heart of the University campus, to provide a service for local businesses as well as the University staff and students.

They recognise the importance of providing additional services to their customers, and do not see themselves as merely retailers of Apple products. A great deal of effort has been expended on finding the right team of personnel to provide these services - whether it be the maintenance of hardware, advising on the best choice of software, provision of a LaserWriting service, or providing training in the use of the various Apple systems. Earlier this year, they hosted the first meeting of the Liverpool local group, which was very well attended. Subsequently, these meetings have been arranged for the second Monday of each month, but the response has been disappointing, and they are making a concerted effort to engender more interest for the December meeting.

Their commitment to, and enthusiasm for, Apple products and Apple users is infectious, and you will always be assured of a welcome whenever you visit either showroom.

## Advanced Micro Products

Mick Tonkin started out in business in the retail clothing trade, and it was his experience with an Apple II bought to look after the stock and accounting side of the business that set him on course to becoming one of the most successful Apple dealers in the UK. He founded AMP in Eltham, S.E. London in 1981 and with the rapid expansion of business moved to larger premises in 1983, John Buckingham also joining the company at this time.

In 1985 they were looking to open another outlet in the business sector of London and were delighted when asked to join Apple in a brand new venture - the AppleCentre. Their Knightsbridge branch, managed by John, opened its doors in March this year in its stylish grey and red Bang & Olufsen decor - its worth a visit to see.

AMP's policy of supplying and supporting Apple's products alone ensures a high level of customer service which pays off in customer loyalty and in recommendations to others.

Mick acknowledges the importance of the role that the user groups have to play and has given his support in the past to the Croydon group, and he and his staff have been most helpful in letting Apple2000 use their facilities for the preparation of copy for the magazine.

You would think that running an organisation like AMP would be a full time job, but Mick still seems to find time for a chat, and even to keep his hand in with software writing on his Apple IIc.

### HERE'S THE SOLUTION. NOW, WHAT IS YOUR PROBLEM?

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## STOP PRESS ON IIGS SOFTWARE

### MOUSEWRITE Roger Wagner Publishing Inc

This is a Mouse-based wordprocessor with integrated spelling checker, mail merge, downloadable fonts, and a glossary function. It makes full use of the added speed, extended memory and interrupt capability of the Apple IIGS.  
Price \$149.95

### MERLIN 16 Robert Wagner Publishing Inc

This is a 16-bit macro assembler which uses the 65816 instruction set for the IIGS.  
Price not available

### SOFTSWITCH Robert Wagner Publishing Inc

Switch Apple IIe and IIc programs on the IIGS.  
Price \$39.95

### WRITERS CHOICE ELITE Activision Inc

This wordprocessor package uses the colour capabilities of the IIGS including text and highlights. Integration with Paintworks Plus allows for colourful desktop publishing.  
Price \$99.95

### PAINTWORKS PLUS Activision Inc

Designed for the IIGS and produces animated sequences in multicoloured graphics. Ideal for cinematic cartoons, banners, posters newsletters etc.  
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### FANTAVISION Broderbund Software

A special effects graphics and animation package. Create hour long movies with sound on the IIGS.  
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### PRINT SHOP Broderbund Software

A new version specially for the IIGS which supports super Hi-Res and uses the mouse. Print your final banner, letterhead, greetings card etc. in colour.  
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### NEWSMAKER Broderbund Software

This is a layout and printing program which allows you to mix text with graphics to create reports and newsletters. The text can be imported from other programs. The LaserWriter is supported on this IIGS product.  
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### DRAWING TABLE Broderbund Software

A drawing program that makes use of 16 colours on the IIGS. Features include super Hi-Res, mouse, pull down menus, object oriented drawings, zoom, linethickness, on-screen rulers and integration with Newsmaker.  
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# AT LAST! SCIENTIFIC WORD PROCESSING FOR APPLES

$$y = \int_0^{\infty} \frac{N_1^{(\alpha-\beta)} + N_2^{(\alpha+\beta)^2}}{\sqrt{2\pi + x}} dx \quad \text{if } \sum_{1944}^{1952} \eta \leq 180 \text{ then } \Omega \neq -1$$

This was printed on an NEC Spinwriter ELF printer using Format-80 Scientific. Other supported printers include Apple's Imagewriter and Epson FX, RX and MX series and compatibles. For more details contact Elite Software Company.

*This extends Elite's FORMAT-80 range. Please contact us for full details.*

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## Apple II GS / PRODOS Compatible

### Release Your Computer's Hidden Potential.

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*MICOL BASIC* is capable of compiling your existing Applesoft programs, significantly increasing their execution speed, but make no mistake, far more than an Applesoft compiler, it contains features usually found only in the highly structured programming languages such as Pascal or C. Now you can have many of these features on your Apple without the difficulty of having to learn a totally new programming language.

### Makes Applesoft Obsolete.

Write programs that anyone can easily understand. Long variable names, indentation, structured loop control, improved file handling and a host of other abilities will make the maintenance of your programs a breeze. Now you can write those GOTOless programs that Applesoft never allowed you to do.

### Fast Compiling and Linking.

*MICOL BASIC* is written in an assembly language, the fastest possible code on your computer. There is little time lost compiling or linking, giving you more time to do what you do best... programming.

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*MICOL BASIC'S* powerful text editor makes editing your programs a real pleasure. No longer will you require an ESCAPE and right arrow sequence to do the simplest tasks. You now have edit with auto character insertion, search, replace, add, auto line number and much more to assist you.

### Price Breakthrough.

Based upon current prices of software on the Apple II, you could easily expect to pay £150 for a product of this quality and utility. Few people are willing to pay that much for software regardless of how good or unique it is. Our price is almost unheard of for a product of this significance, a price any Apple II owner can easily afford. R.R.P. \$89.95 (£64.25) + £2 P&P and VAT.

### Engineered For People Who Truly Love Programming.

Speed, structure and affordability are still not enough. A language system must not only provide you with these necessary features, it also must be convenient to use if your time spent in programming is to be truly enjoyable. *MICOL BASIC* is easy to use, being engineered to the highest man-machine standards available. It does most of the busy work, leaving you free to do what the computer cannot do... **THINK.**

### Superior Documentation.

Poorly written documentation is a major complaint of many computer programmers. Our documentation will be a pleasant surprise. In over 200 pages you will find not only an easy to understand description of the software, but also a complete tutorial on structured programming.

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# MACSNAP<sup>TM</sup> PLUS 2

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**MacSnap Plus 2** is designed to double the memory capability of your Macintosh Plus. Utilizing state of the art RAM technology, **MacSnap Plus 2** gives you a full 2 megabytes of memory and improved productivity in a very cost effective package.

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Included with **MacSnap Plus 2** are three high performance software utilities - a RAM disk, Apple Switcher<sup>TM</sup> and a print spooler. Combined with **MacSnap Plus 2's** expanded memory, these utilities allow you, the productivity-conscious user, to be the best you can be.

### BENEFITS:

- Twice the memory capability.
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- More power - utilize a greater variety of software.
- Access up to 8 programs simultaneously in Switcher<sup>TM</sup>.
- Print spooling capability - work on one task while printing another.
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- State of the art, low power DRAM Technology
- Completely transparent to the original Macintosh operating system.
- Configures memory as a contiguous block of RAM
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- Memory expansion includes OEM SIMM's
- Draws only 2.2 watts of power and requires no auxiliary fan.
- Includes high performance software package.
- Complete with user documentation included.

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**MacSnap Plus 2 is now available for £299.00**

MacSnap Plus 4<sup>TM</sup> is also available and gives you 4 Megabytes for £1299.00

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## MacTel - An Introduction

Welcome to MacTel! You may have read the news item elsewhere, MacTel and Apple 2000 remain financially and operationally independent. What does this link up mean for you?

Firstly, for those who have not used MacTel before, MacTel is the primary bulletin board system for Macintosh users in Europe. It is a FREE News and E-Mail service. Several Megs of free download files are available. A subscription is only charged for access to the rest of the download files area, but the range of software available is so excellent that most people subscribe. We have three lines, all connected to Macintoshes and hard discs, and the service runs on a 24 hour basis. Nottingham has 40megs disc space on line, and Sheffield has 20 meg. Its like having a large slow hard disc of your own at the end of a telephone line, so when you want a file, just call up and download it.

The news service is so enormously vigorous and useful that it is published as a magazine called "Clipboard" which is designed to come out every two months. Some of you may have seen one, or even bought one at the AppleWorld Show.


MacTel and Apple 2000 had a back-to-back stand at the Show, and have devised a joint subscription structure, enabling a reduction in cost to those who want to be members of both and increasing the awareness of those who are not. Apple 2000 magazine and Clipboard magazine make an unbeatable combination in supplying the Macintosh user with up to date information and gossip at regular intervals.

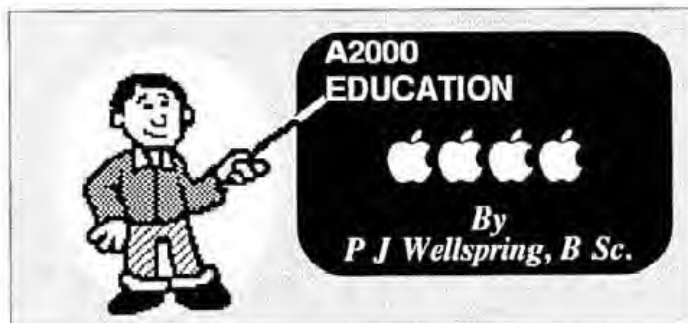
Desktop communications seems to be growing very fast this year, with new callers trying MacTel out every day. If you are curious, why not give it a try? It's an Aladdin's Cave of information and software treasures for business, programming and recreational users. You do of course need a modem, but try borrowing one if you want to experiment first. If you are serious, you should get one capable of 1200 baud, at least in one direction.

Ring MacTel's voice line for advice if you are not sure. Our modems scan your incoming signal, so it doesn't matter what speed you come in at.

You don't need to worry about paying a lot for communications software. Apple 2000's postal packs include Public Domain and Honorware communications software, and of course MacTel has a starter pack which contains instructions and software. There is plenty of help once you are in the board as all the menus have 'Help' commands.

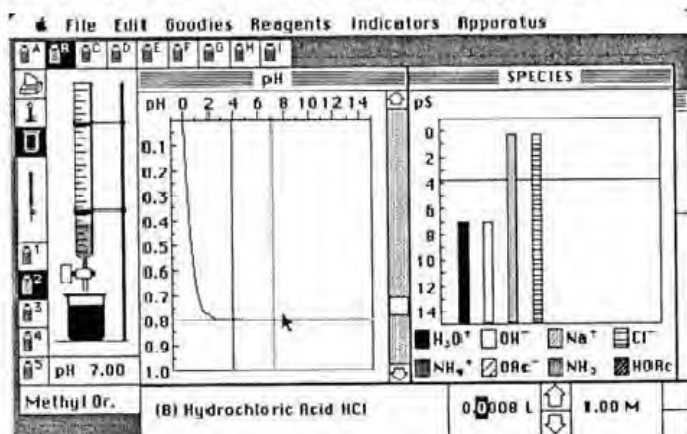
The Apple IIGS has made a big impact on Apple users, but we have agreed to remain primarily with the Macintosh and its successors. BABBS will support the IIGS as it gradually takes hold in the market place. There is a new Mac rumoured for early in the New Year, and of course the Levco Prodigy and the Megascreeen have shown us the sort of performance we can hope to get from the new machines, albeit at a much greater cost than Apple will charge us for the new Macs - or am I being optimistic? See you next issue. **David Nicholson-Cole**

MacTel runs on 0602-817696, 0602-811950, 0742-350319 at all baud rates from 300-2400, 8-N-1. Send A4 SAE for leaflet etc to : MacTel, 15 ElmTree Avenue, West Bridgford, Nottingham NG2 7JU or phone 0602-811950 (0602-811950) 




## MacChemistry™

Titration is an expensive business. There's all the chemicals, the equipment and the time. In the initial stages of learning the techniques, many students haven't got the foggiest idea of what they are meant to be doing so they waste resources unnecessarily. To combat this, there have been many volumetric analysis simulations on computer. 'Titration' in MacChemistry is such a program. You are given the choice of 9 reagents and then how much you want to put in the burette or the beaker. It is also possible to specify the molar concentration and also to make up a mixture of two reagents. There is a choice of 5 indicators with a good pH range.



Carrying out the titration is easy and there are dynamic demonstrations of the pH value of the mixture (as a graph) and pS (as a bar chart). Excellent for demonstrating what is going on in the beaker. It is possible to change indicators mid-stream. The change is shown from black to grey or vice versa. (Where the IIGS will score!) The main criticism would be that it lacks a testing facility. i.e. It would be better if one 'unknown' and one 'known' reagent could be handed to a student and they then had to analyse the 'unknown' to the best of their ability. To a certain extent this can be done at the moment but it relies entirely on the honesty of the student.

MacChemistry also contains some excellent MacPaint diagrams of apparatus and chemical formulae. Invaluable from the staff preparation point of view. Chem Lab Periodic Table is a handy reference to all the elements. ChemNEST is a sort of filing system of chemistry diagrams and information. But it is clumsy to add data and the search system is not very flexible. The final offering in MacChemistry is a specialist chemistry font which has some useful symbols.

On the whole, very good value for money. It would be an asset in the lab and the staffroom. 

# ORBITER

by M Oshaughnessy

**T**his Programme is not a simple game, it's a simulation (ie: a reproduction of real-life events). You get a fast-moving programme with not only graphics but also sound. A synthesised voice gives you commands to carry out, and you hear the full-throated roar as the main engines start.

However, before starting the programme a read-through of the manual is advised, as this is a complicated programme and it helps to understand what it does. If you follow The Training Flight "Walk Through" in the manual, then you will have an understanding of the basic principles involved in flying the Space Shuttle. I say this because, as in most things American, a considerable number of acronyms occur (e.g. APU - auxiliary power unit, SRB - solid rocket booster, ET - external tank, etc.). In fact, it takes two pages at the back of the manual to list all of them!

If you are prepared to spend the time and effort to understand this programme, then you will be amply rewarded. Considering all the calculation that the Orbiter programme does, it executes very smoothly indeed. I do not intend to go

into a detailed description of the commands (well, the manual is 73 pages long so that will give you an idea of the complexity). Some people who do not bother to study the programme properly may dismiss it as being boring but, as with all things complicated, some effort is required on the part of you (the user) to appreciate it fully.

Just when you may think it's easy, the programme can randomly introduce problems - SUDDENLY in middle of the Launch Phase BLIP BLIP the Main Engine cuts out and you have to work hard in order to abort the mission and land safely. Another time you have achieved orbit and are relaxing when SUDDENLY BLIP BLIP Fire Hazard and you have to promptly operate the fire extinguishers in the affected area.

There are many different Instrument Panels, Views through the Cockpit Window, Views into the Payload Bay, a Map continuously updating with the Orbiter's position over the Earth, Numerical Displays of Orbital Data which are being updated all the time.

There are a number of Missions ranging from the relatively simple

launching of satellites into orbit, to complicated manoeuvring to rescue damaged satellites and bring them back to Earth. (The much publicised rescue of two damaged satellites which was made on behalf of Lloyds of London).

It's a challenge, fun, and educational all at once. It could be used on any science course to explain and illustrate the principles of space flight and satellite orbits. However, as it uses a modified System, it was not possible to run the programme unless it was started using its own system. (The manual states that it's not HFS compatible but I had no difficulty in running it on a Mac Plus under its own system). Mention is made that a Hard Disk could be used, but I had no success with the review copy (version 1.0) so maybe later a HFS version will be released. As the system is modified it was impossible to make screen dumps - it would be very nice if one could create a poster of the initial graphics screen to put on the wall.

If you think that you could be interested in this programme it will pay you to check the prices before you buy - one source in MacUser offers it for about £26.95 while another has it for £59.95.

## ORBITER

Spectrum HoloByte Inc  
1050 Walnut Suite 325  
Boulder, CO 80302  
U. S. A.

Requires 512k Mac or Mac Plus



## Macintosh Independent Conference & Exhibition '87

Announcing the U.K.'s first independent Conference & Exhibition specifically for users of the Macintosh.

Quantum Research, as specialists in organising machine-specific exhibitions, are launching MICE 87 - the first Macintosh Independent Conference & Exhibition to take place from 14th - 16th May 1987 at the Westminster Exhibition Centre, the Royal Horticultural New Hall, Vincent Square, London, SW1.

Announcing the show, Iain Norton, the Show Director said, "The show will represent an opportunity for users and potential users of the Macintosh to come face to face with over 50 major suppliers of Macintosh-related products. As well as products from the domestic market, we intend to attract American companies to exhibit products new to the U.K. By May, the number of Macintosh users in the U.K. may have grown by as much as 50% over the current installed base, if the present growth rate is maintained, and those new users in particular are going to need a show like this to get to grips with the products

available."

"We will also be organising a three day user conference alongside the show in conjunction with MacUser magazine and we are currently doing research with users to ensure that the conference programme reflects their real interests. In return for the help we are getting from Apple2000, the membership will be the first to have the opportunity to book places. A show like this must have a forum for independent information and the conference will give the opportunity for visitors to hear impartial advice."

"The full promotion plan for the show includes advertising in all the Macintosh-specific media as well as the general computer press. By May anyone who uses a Macintosh or is thinking of buying one will know about the show, and the reasons they shouldn't miss it."

For further details please ring Iain Norton or Frank Gouws on (+44) 1 403 1473 MICE 87 is an independent exhibition managed and owned by Quantum Research Limited, it is neither affiliated with nor sponsored by Apple Computer Inc.

## Le Rear - or Back Page Burlblings


That's another exciting year over and I think the next twelve months will be even better. Technology has slowed slightly over the past twelve months, but on the horizon are some signs of another technological leap.

Large optical storage devices are being perfected and this will mean cheap mass storage for the masses, some predict that the whole area of knowledge will improve when everyone has a 50 Gigabyte Encyclopideia on the Hi-Fi shelf or T.V. Stand linked to the latest 6 metre flat screen, super plasma monitor with interactive brain control !!! Beam me up Scottie.

If thats the case, I can see that my retirement is going to be very rewarding, I will be able to learn all that stuff I didn't at school ! What will I do with all the knowledge though ?

Right, suppose I had better strap myself in for the next 'Techno Leap' !!!!!!!

See you next year ..... Techno Man




Ready, Set, Go! 3


  
 WriteNow

  
 Ms-Works 1.0

  
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 RagTime

  
 CopyMac 6.1

  
 DiskExpress™

**The Macintosh Software Scene Hots Up !**  
**Some of the latest offerings seen at AppleWorld**

## Super Mystery Prize in our Caption Competition



All you have to do is send a suitable caption of less than 5 words, for the picture above by January 5th 1987. State what Machine you have and the best one will receive a suitable prize. Mark envelope 'CAPTION COMP'



**D**oesn't time fly ! It hardly seems a year ago when us ever eager *BASUG* members waited patiently for our little A5 Hardcore to arrive by Royal Snail. We would carefully open the small package, don our spectacles and with a magnifying glass nearby, digest the bi-monthly offerings. Always searching for Apple information and not content with just the high street publications, we relished the contents of our own membership magazine. Since then a great deal has changed, but have we !

Lets see.. We still wait with anticipation for our magazine to arrive. However our status has changed from being a *BASUG* member to being an *Apple2000* member, and our magazine has inherited the title as well. Those of us with small letterboxes have had to get the jigsaw out so that the postman can get the now A4 magazine through the door. This time on opening the package we don sunglasses before gingerly removing the magazine from the brown envelope, hoping that the dog avoids suffering corneal damage from the front cover. From cover to cover the contents have swollen and the pages have expanded past sixty, a heavyweight contender in the computer publication division. Inside a professional typeset magazine makes for easy reading, with new areas, new writers and new features offering in depth articles and reviews, along with the all important user information.

On the face of it I think that we as members are better off now than we have ever been in the past. The new magazine and *Apple2000* image has brought about radical change in the structure and organisation of the group and the result has been an improved service to us members and a large increase in membership. Talking about images, at the recent AppleWorld Show, the most visible exhibitors to be seen, in and out of the Business Design Centre were the volunteers from *Apple2000*. Dressed in their zany uniforms and outrageous rainbow ties they never failed to create an impression, a lasting one at that. Forget about the DynaMac and Iigs, the star of the show was the limited edition *Apple2000* tie. I hear that there are still a few on offer in *Shop2000* so hurry now and do not miss out on this collectors piece. If your dog thought that cover was bright, well then, just wait till he sees the tie...

Have we changed ? I think so, but you will be the best judge of that. New ideas and proposed new Apple products are forcing us to make decisions about our present and future machines. A fresh lease of life has been given to the trusty old Apple II and this is in turn reflected in the group. A renewed interest and a new pride is developing within the membership and we should all use it to contribute, and further improve the services of *Apple2000*. ( so don't forget your subs ! Ha! ) 🍏

*Merry Xmas and a Happy New Year*

# THIS MONTH'S SUPER SAVERS



## APPLE // INTERFACES

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Computer Factory	
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Cirtech 64K	
Champion & cable	£102.00
Cirtech II & //e Z80	£37.80
Wildcard Plus .....	£65.00
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Development .....	£50.00
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Interface .....	£149.00
16K Ram Card II .....	£50.96
//e 64K 80 Column	
Card .....	£51.00
128K Ramcard +	
Software .....	£145.00



## APPLE /// OFFERS

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Apple Speller /// .....	£10.00
Quickfile /// .....	£15.00
Super Serial Card ///	£35.00
Business Basic /// ..	£10.00
Business Graphics ///	£10.00
Pascal /// .....	£20.00
PFS : Graph /// .....	£20.00



## PRINTERS

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Sheet .....	£263.00
Epson RX100+ .....	£249.00
Epson FX85 .....	£339.00
Epson FX105 .....	£439.00
Epson LQ1000 .....	£625.00
Epson LQ800 .....	£495.00
Hewlett Packard	
Laser Printer (inc. MAC	
Software & Cable)	£2299.00

## EPSON JX-80

Offering all the features you'll find on the FX-80, but with a 4-colour ribbon, the JX80 gives more impressive business graphics than has ever been possible – from a dot matrix printer.

Printing colours, individually or in combination; anything from complex graphics to the simple emphasis of key points – even single characters can be achieved to a professional standard. And, of course at a professional turn of speed. £375.00

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## BUFFERED GRAPPLER

The Buffered Grappler offers a great number of functions such as dual hi-res graphics dumps; the ability to rotate an image through stages of 90 degrees, and a printer buffer of 16K which can be expanded to accommodate 64K maximum. £149.00

Please add £2.50 delivery on cards or software, £5.00 for larger items.

Prices quoted are exclusive of VAT.

Please call for details of any Apple related software or hardware. Also available ex-demo and reconditioned stock including warranty.



## MAC OFFERS

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Turbo Touch .....	£65.00
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Adaptor .....	£67.15
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## HYPERTEXT FOR THE MACINTOSH

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**Use the power of hypertext to create live areas on the screen called "buttons".** Click the mouse on any user-defined button to access or create additional levels of detail, notes or cross references.

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